

**LEGAL LIABILITY ISSUES AND REGULATION OF
ARTIFICIAL INTELLIGENCE (AI)**

**A DISSERTATION TO BE SUBMITTED IN PARTIAL
FULFILMENT OF THE REQUIREMENT FOR THE AWARD
OF DEGREE OF MASTER OF LAWS**

SUBMITTED BY

[SHALINI RAI]
[1220990026]

SCHOOL OF LEGAL STUDIES

UNDER THE GUIDANCE
OF

[DR. NITESH SRIVASTAVA]
[ASSISTANT PROFESSOR]
SCHOOL OF LEGAL STUDIES



BBD UNIVERSITY
SESSION 2022-23

CERTIFICATE

This is to certify that the dissertation titled, “*Legal Liability Issues and Regulation of Artificial Intelligence*” is the work done by *Shalini Rai* under my guidance and supervision for the partial fulfilment of the requirement for the Degree of **Master of Laws** in School of Legal Studies Babu Banarasi Das University, Lucknow, Uttar Pradesh.

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1220990026

LL.M. (2022-23)

(CCL)

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A dissertation to be submitted in partial fulfilment of the requirement for the award of degree of Master of Laws.

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LIST OF CASES

- VEHICLE INTELLIGENCE & SAFETY LLC VS MERCEDES BENZ USA LLC
- BLUE SPIKE LLC VS GOOGLE INC.
- HEWLETT PACKARD CO. VS SERVICE NOW INC.
- HESS VS ADVANCED CARDIOVASCULAR SYS.
- NEW IDEA FARM. EQUIP. CORP. VS SPERNY CORP.
- NARUTO ET AL VS SLATER
- DONOGHUE VS STEVENSON
- JUNIOR BOOKS VS VEITCHI
- FERGUSON VS BOMBARDIER SERVICE CORP.
- NELSON VS AMERICAN AIRLINES INC.
- HADLEY VS BAXENDALE
- O' BRIEN VS INTITIVE SURGICAL INC
- BANKER VS HOEHN
- UNITED STATES VS ATHLONE INDUS INC.
- PAYNE VS ABB FLEXIBLE AUTOMATION INC.
- HILLS VS FANUC ROBOTICS AM.INC.
- MEYER VS KALANICK
- RAJASTHAN CYLINDERS AND CONTAINERS LMT. VS UOI
- BURROW GILLS LITHOGRAPHIC CO. VS SARONY
- BLEISTEIN VS DONALDSON LITHOGRAPHIC CO.
- RITZ HOTEL PUNE VS ESIC
- ESIC CORPORATION VS RAJKESHAW
- EMPLOYEES STATE INSURANCE CORP. VS R K SWAMMY
- MR. S.C. SHARMA VS ESIC

- NARKESARI PRAKASHAN KARMACHARI SANGH VS NARKESARI PRAKASHAN LTD. & OTHERS
- BATLIBOI EMPLOYEE UNION VS BATLIBOI LTD. & OTHERS
- ANVAR P.K. VS P.K. BASHEER
- STATE OF MAHARASTRA VS PRAFUL DESAI
- JUSTICE K.S. PUTTASWAMY & OTHERS VS UOI & OTHERS
- LOUIS VUITTON VS GOOGLE
- LUSH VS AMAZON

ABBREVIATIONS

- **UNCITRAL** – United Nations Commission on International Trade Law
- **IT** – Information Technology
- **GPT** – Generative Pre-trained Transformer
- **AI** – Artificial Intelligence
- **ANI** – Artificial Narrow Intelligence
- **IPR** – Intellectual Property Right
- **AGI** – Artificial General Intelligence
- **ASI** – Artificial Super Intelligence
- **WABOT** – Waseda robot
- **IBM** – International Business Machines
- **SNARC** - Stochastic Neural Analog Reinforcement Computer
- **SIRI** – Speech Interpretation Recognition Interface
- **NITI** – National Institution for Transforming India
- **GPAI** – Global Partnership on Artificial Intelligence
- **CBSE** – Central Board of Secondary Education
- **NCSP** – National Cyber Security Policy
- **RAISE** – Responsible AI for Social Empowerment
- **CNBC** – Consumer News and Business Channel
- **NDA** – Non Disclosure Agreement
- **NLP** – Natural Learning Processing

- **TRIPS** – Trade **R**elated **A**spects of **I**ntellectual **P**roperty **R**ight
- **CDPA** – **C**opyright **D**esigns and **P**atents **A**ct
- **CGW** – **C**omputer **G**enerated **W**orks
- **UKIPO** – **U**nited **K**ingdom **I**ntellectual **P**roperty **O**ffice
- **DABUS** – **D**evice for the **A**utonomous **B**ootstrapping of **U**nified **S**entience
- **ILO** – **I**nternational **L**abour **O**rganization
- **ILS** – **I**nternational **L**abour **S**tandards
- **UNICRI** – **U**nited **N**ations **I**nterregional **C**rime and **J**ustice **R**esearch **I**nstitute
- **CCW** – **C**onvention on certain **C**onventional **W**eapons
- **CTBT** – **C**omprehensive **N**uclear **T**est **B**an **T**reaty
- **FAO** – **F**ood and **A**gricultural **O**rganization
- **IMO** – **I**nternational **M**aritime **O**rganization
- **IOM** – **I**nternational **O**rganization for **M**igration
- **DIPP** – **D**epartment of **I**ndustrial **P**olicy and **P**romotion
- **GDPR** – **G**eneral **D**ata **P**rotection **R**egulation
- **PDPB** – **P**ersonal **D**ata **P**rotection **B**ill
- **SCBA** – **S**upreme **C**ourt **B**ar **A**ssociation
- **MEITY** – **M**inistry of **E**lectronics and **I**nformational **T**echnology
- **RTI** – **R**ight **T**o **I**nformation
- **ICT** – **I**nformation and **C**ommunication **T**echnologies
- **CCPA** – **C**alifornia **C**onsumer **P**rivacy **A**ct
- **UNHCR** – **U**nited **N**ations **H**igh **C**ommissioner for **R**efugees

- **ABHED** – **A**rtificial Intelligence **B**ased **H**uman **E**fface **D**etection
- **PSA** – **P**ublic **S**afety **A**ssessment
- **SUVAS** – **S**upreme Court **V**idhik **A**nuvaad **S**oftware
- **SUPACE** – **S**upreme Court **P**ortal for **A**ssistance in **C**ourts **E**fficiency
- **NCRB** – **N**ational **C**rime **R**ecords **B**ureau
- **CCTNS** – **C**rime and **C**riminal **T**racking **N**etwork and **S**ystems
- **ICJS** – **I**ntegrated **C**riminal **J**ustice **S**ystem
- **LLM** – **L**arge **L**anguage **M**odels

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LEGAL CITATION: TABLE OF STATUTES

S.N.	NAME OF THE STATUTES	COUNTRY	YEAR
1	CONSUMER PROTECTION ACT	INDIA	1986
2	CONSUMER RIGHTS ACT 2015	UK	2015
3	CONTRACT (RIGHTS OF THIRD PARTIES) ACT	UK	1999
4	THE INFOEMATION TECHNOLOGY ACT	INDIA	2000
5	THE COPYRIGHT ACT	INDIA	1957
6	INDIAN CONTRACT ACT	INDIA	1972
7	THE MOTOR VEHICLE ACT	INDIA	1988
8	PUBLIC LIABILITY INSURANCE ACT	INDIA	1999
9	SALE OF GOODS ACT	UK	1979
10	SALE OF GOODS ACT	INDIA	1930
11	UNCITRAL MODEL LAW ON ELECTRONIC COMMERCE	UNITED NATION COMMISSION ON INTERNATIONAL TRADE LAW	1996
12	US CODE: TITLE 17- COPYRIGHTS	USA	1976
13	US CODE: TITLE 35- PATERNTS	USA	1959

CHAPTER 1

INTRODUCTION

The 20th century saw unprecedented growth in technology. This explosive growth in the field of computing and communication technology is touching to speak every aspect of human life and society. The industrial era gave way to the Internet era. Most countries, especially developing countries, were taking small steps in adopting the UNCITRAL Model Law on electronic commerce as their IT Acts or E-Commerce Acts. The developments of the early 21st century are pointing to a new world where human intelligence is complemented by Artificial Intelligence. AI is the ability of a computer to perform tasks, usually involving humans. This research paper is an attempt to study evolution in artificial intelligence. This has implications for society as to opportunities and challenges, liabilities, issues surrounding AI, and the adequacy of existing liability frameworks to address their issues and challenges. This paper aims to introduce new technologies in the workplace and the future of work. This research paper examines issues related to the quality of jobs in future labour markets. It addresses human rights, privacy concerns, IPR issues, competition concerns, and the detrimental effects it has on security, terrorism, and the ChatGPT technique. These highlight the benefits of a human rights-based approach to protect privacy against aggressive electronic surveillance. This research paper includes the issues of AI with the corporate and criminal law.

1.1 What is ARTIFICIAL INTELLIGENCE:

John McCarthy, the inventor of artificial intelligence, invented the term artificial intelligence (AI). Artificial intelligence is described as "the theory and development of computer systems able to do activities ordinarily requiring human intelligence, such as visual perception, speech recognition, decision-making, and language translation" in the Oxford Dictionary.

The idea and creation of computer systems capable of carrying out activities that typically require human intelligence is known as artificial intelligence (AI). Examples include activities like speech recognition, learning, making decisions in the face of uncertainty, and language translation.

AI refers to a computer's ability to carry out tasks that are typically performed by humans. This involves the "capacity to reason, uncover meaning, extrapolate, or learn from past experience" and afterwards discern patterns and relations to react quickly to shifting circumstances.

1.2 Types of Artificial Intelligence

Future AI talks have classified many types of AI, which are as follows:

1. Narrow or weak AI –

This is the type we see around us every day. It is also known as Artificial Narrow Intelligence (ANI). It is goal-oriented and only displays particular actions. These jobs include facial and voice recognition, drone robots, browser recommendations, and so on. This means it can't accomplish anything other than what it's been assigned to perform. These restrictions are what give it the moniker "narrow" or "weak" artificial intelligence technology.

2. General or strong AI –

Artificial General Intelligence, on the other hand (AGI). It thinks that machines can have the same level of consciousness as humans. As can be shown, exactly replicating the human brain is difficult. As a result, this category is still in its early stages, with the notable exception of Fujitsu's K, one of the fastest supercomputers ever built.

3. Artificial Superintelligence (ASI) –

Above and beyond the aforementioned sorts is artificial superintelligence (ASI), which aims and may succeed in reaching beyond human minds. Despite the fact that this is the true Artificial Intelligence future right now, ASI is a highly conceivable and rapidly approaching event in the field of AI.

1.3 HISTORY OF ARTIFICIAL INTELLIGENCE

As you can see, AI made our life easier than we could have imagined. As a result, it is critical to recognise the history of such an intriguing topic. AI is not a new concept; it has always been present in myths and stories. Through their works and stories, the early thinkers and philosophers produced conceptions such as mechanical beings and artificial entities. It was enough to motivate future generations to do some tangible work on it.

1. The Turing Test:

A significant contribution came in the form of a paper in 1950. Alan Turing's 'Computing Machinery and Intelligence' explores the machine's ability to demonstrate intellectual

behaviour. The Turing Test was previously known as the Imitation Game before being renamed The Turing Test. Turing asserted that a computer possesses Artificial Intelligence technology if and only if it can respond to human questions under certain conditions. Everyone understands what The Imitation Game is about now, thanks to Turing's film, as well as its history, development, and future.

2. The Dartmouth Workshop

More substantial steps were accomplished in the subject of Artificial Intelligence in 1956, when the phrase was coined at Dartmouth College. The cognitive scientists Marvin Minsky and John McCarthy, as well as two senior scientists, Nathan Rochester and Claude Shannon, coordinated the Dartmouth Workshop. The name was proposed at a conference based on the concept that "any facet of learning or any other trait of intelligence can be so thoroughly characterised that a machine can be constructed to replicate it."

3. Important discoveries in the AI Artificial Intelligence field

In the 1960s, the workshop launched several sorts of research, including Unimate, an industrial robot that welded parts onto cars with its arm; Eliza, the first Chatbot, which functioned to communicate like a human in English; and WABOT-1, the first anthropomorphic. This period, from 1956 to 1974, was a golden age for the field, with many individuals excited for AI to succeed. In addition to the Artificial Intelligence technology breakthroughs described above, here are some more ground-breaking ones.

4. The AI winters

The enthusiasm, however, did not last long. Computer scientists saw a reduction in government funding, which halted all experiments and inventions, as well as negative feedback. This period was known as AI Artificial Intelligence winter, and it lasted from 1974 until 1980. The second AI winter, on the other hand, struck the world from 1987 and 1993 for the same reasons.

5. Emerging development in the AI field

Following the second AI field, there was renewed interest in AI. In 1997, IBM Deep Blue defeated world chess champion Gary Kasparov, indicating a hopeful future for artificial intelligence. This was followed by the AI in Roomba, a vacuum cleaner; the use of AI by firms such as Netflix, Twitter, and Facebook; and Google unveiling 'Google Now,' among other

things. AI has also had an impact on the film industry, with numerous sci-fi movies featuring robots, bots, futuristic technology, and other AI-related aspects.

1.4 ARTIFICIAL INTELLIGENCE AND LEGAL ISSUES:

The legal service industry is one of the biggest in the world, but it is also considered to function with a minimal concentration of digitalisation. The legal industry takes a rather traditional approach and is slow to adopt innovative methods. It's essential for us to acknowledge that artificial intelligence has the ability to alter how lawyers currently practise law and how India views the rule of law. Technology is relevant precisely as it promotes effectiveness, transparency, and objectivity in public administration, according to **Judge D.Y. Chandrachud**. The purpose of AI is to give judges a positive and constructive tool to evaluate or assess their work, processes, and judgements. The main goal is to eventually increase the accessibility of justice for regular people. Although the legal industry is still seen as being labour-intensive, the constitution of the Indian practice of law requires that the entire process be completed manually.

Artificial intelligence (AI) is a rapidly developing science that has the potential to significantly revolutionise a wide range of sectors, including transportation, finance, healthcare, and criminal justice. To ensure their secure and accountable usage, however, a number of legal liability concerns and regulatory difficulties related to AI system development and deployment must be resolved.

Criminal justice and criminal behaviour have both been affected by artificial intelligence (AI), which has transformed numerous sectors. The management of supply chains, evaluation of risks and mitigation, employee screening, social networking data exploration, and various sorts of analysis and solving issues are just a few of the ways that AI is employed in criminal organisations. The primary distinction is whether the objectives of the particular organisation are legitimate or illegal. Similar dynamics and difficulties arise in the distribution of illegal substances, knockoff goods, and weaponry as in the control of distribution networks for any legitimate good. With operations spread across all six continents with developed economies, some crime syndicates are now operating more effectively than ever thanks to AI.

Fundamental AI technologies can be used to perform various functions, including:

- Expertise automation.
- Image recognition and classification.
- Speech-to-text and text-to-speech conversion.

- Text analytics and generation.
- Voice-controlled assistance (like Amazon Echo and Google Home).
- Language translation.

Legal departments and law firms may also use AI to automate a variety of time-consuming or repetitive tasks, including:

- Document production, including e-discovery.
- The analysis of key law department and law firm metrics and key performance indicators.
- Research and other tasks in support of their companies' or firms' compliance efforts.
- Legal research.
- Developing litigation strategy.

Limitations of Liability:

In a typical limitation of liability provision:

- Some liabilities, such as lost sales, are excluded entirely and are therefore unavailable to an aggrieved party.
- Some liabilities, such as for death, personal injury, or fraud, are not subject to any limitations.
- Remaining liabilities are capped at either a fixed dollar amount or a calculated amount, often based on annual or annualized fees for the service.

ARTIFICIAL INTELLIGENCE

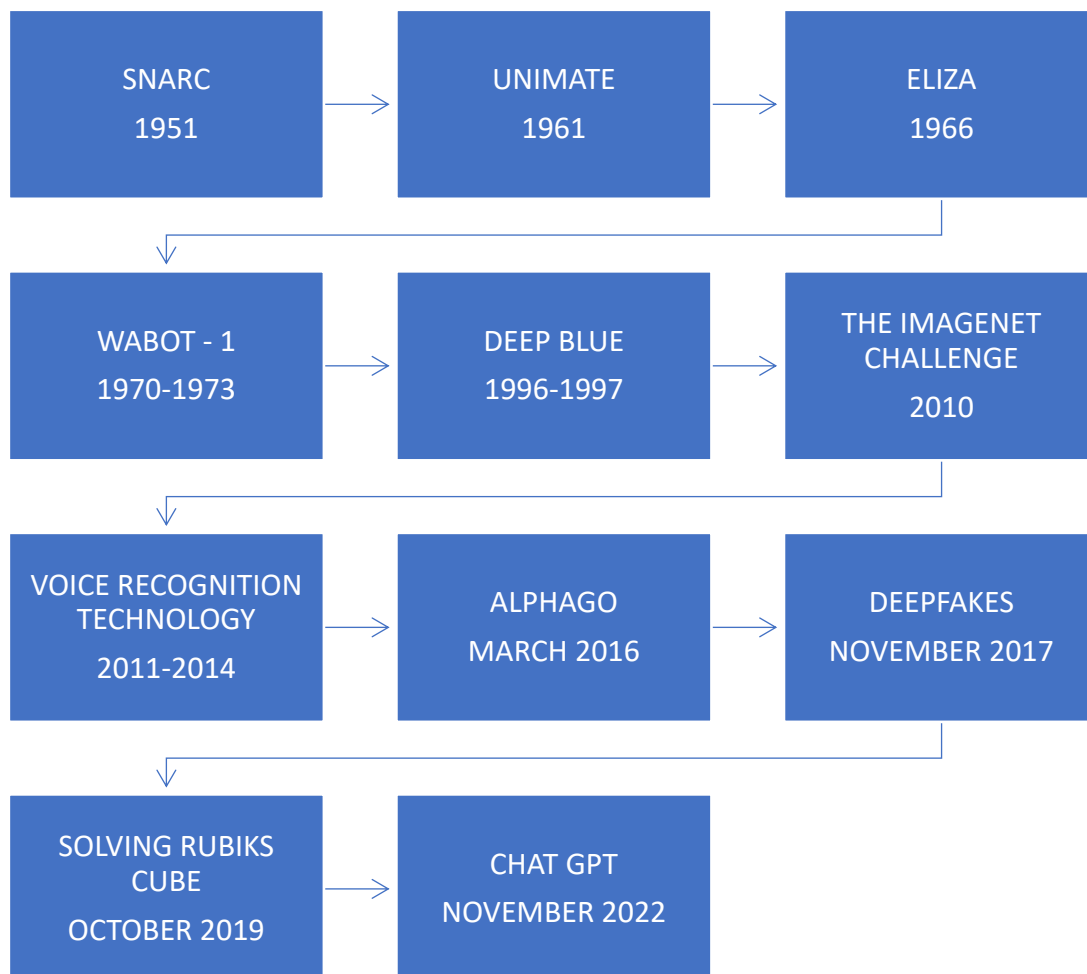
Artificial intelligence (AI) is a new technology that uses machines to enhance intelligence and human capacities of sensing, comprehending, and acting. Natural Language Processing (NLP) and inference engines are two technologies that can help this system analyze and comprehend all the information it receives. Artificial intelligence is a system that acts in the physical world using technologies such as expert systems and inference engines.

HISTORY AND ADVENT OF ARTIFICIAL INTELLIGENCE

During World War II, Alan Turing decoded the 'Enigma' Code. Alan Turing was a British scientist, and the 'Enigma' Code was used by German forces to securely relay signals. Alan Turing and his colleagues developed the Bombe Machine, which was used to decipher Enigma's signals. The Enigma and Bombe Machines lay the groundwork for machine learning. According to Turing, a machine is 'intelligent' when it can converse with people without the

humans understanding it is a machine. The phrase "artificial intelligence" was first used at the Dartmouth Conference in 1956, convened by American computer scientist John McCarthy. The use of this word resulted in the establishment of research centres around the United States. Researchers such as Herbert Simon and Allen Newell were instrumental in popularising artificial intelligence. In 1951, the Ferrenti Mark 1 employed an algorithm to master the game of checkers. Following that, Newell and Simon created the General Problem Solver algorithm to solve mathematical problems. Algorithms for solving problems in mathematics and geometry were further developed in the 1960s. Machine vision learning and the development of machine learning in robotics began in the late 1960s. In 1972, Japan created the first intelligent humanoid robot. It was known as the WABOT - 1.

1.5 TIMELINE HISTORY OF AI



1. **SNARC** - Stochastic Neural Analog Reinforcement Computer (SNARC) 1. SNARC - Marvin Minsky and Dean Edmonds invented the first neural network, the Stochastic Neural Analog Reinforcement Computer (SNARC). The system's task was to assist a virtual rat in successfully completing a maze puzzle.
2. **UNIMATE** - UNIMATE was the first industrial robot whose arm was trained to transfer die castings and solder them onto cars.
3. **ELIZA** - ELIZA was a chatbot programme that could talk in English as if she were a real person.
4. **WABOT-1** - The WABOT-1 was the first known anthropomorphic robot with eyesight, motor abilities, and conversation skills.
5. **DEEP BLUE** - Garry Kasparov competed in two six-game chess matches against IBM's Deep Blue supercomputer. The supercomputer won both of the bouts.
6. **THE IMAGENET CHALLENGE** - Create a Visual Recognition database to aid visual object recognition software.
7. **VOICE RECOGNITION TECHNOLOGY** - After Apple debuted SIRI, there was a surge in voice recognition technology. Google Now, Cortana from Microsoft, and Alexa from Amazon quickly followed.
8. **ALPHAGO** - Google's AlphaGo defeats Go world champion Lee Sedol in an abstract strategy game.
9. **DEEPFAKES** - DEEPFAKES are media that use artificial neural networks to replace a person in an existing photograph or video with someone else's likeness.
10. **SOLVING THE RUBIK'S CUBE** - OpenAI successfully trained a robot hand dubbed Dactyl to solve the Rubik's cube in a real-world situation.
11. **CHAT GPT** - OpenAI's Chat GPT, or Chat Generative Pretrained Transformer, is a cutting-edge language model for generating human-like text in real time.

1.6 ARTIFICIAL INTELLIGENCE IN INDIA

In the month of June 2018, the NITI Aayog developed India's national policy for artificial intelligence. This report provides an overview of the government's aim and roadmap for developing the sector in India. Artificial intelligence would not only help India's economic development, but it will also help with social development.

THE CURRENT SCENARIO OF ARTIFICIAL INTELLIGENCE IN INDIA

According to an Economic Times study, India saw a 108 percent increase in startup activity in 2018. Artificial intelligence was shown to be one of the fastest expanding domains among them. Approximately 400 startups are focusing on Artificial Intelligence and machine learning fields. Private sector investment in India is almost 150 million dollars, and the figure has been steadily increasing since 2016. However, India lags behind countries such as China and the United States in terms of investment. Most startup companies have focused on industries such as e-commerce, edtech, and fintech.

STATEMENT OF PROBLEM

1. Trust related problem

As Artificial Intelligence algorithms become more powerful by the day, it also brings several trust-related issues on its ability to make decisions that are fair and for the betterment of humankind.

2. Lack of technical knowledge.

Lack of technical skills and knowledge: In order to integrate and implement AI and its applications in organizations, the professionals should have great knowledge and understanding of the latest advancements in AI and its advantages and disadvantages.

3. Lack of privacy

When companies have such massive amounts of information about their existing clientele, potential customers, and competitors, the collective right to privacy may be threatened, especially as AI evolves and new ways to use personal information are discovered.

SIGNIFICANCE OF RESEARCH

- AI provide facilitative tools to judges in order to recheck or evaluate the work.
- The main purpose is to provide access to justice to common people in the long run.
- Artificial Intelligence will influence the future of law.
- To deal with issues of Artificial Intelligence with law practices.

HYPOTHESIS

1. Effective legal liability and regulation of artificial intelligence can ensure that AI systems are safe, transparent, and trustworthy, and can mitigate potential harms to individuals and society. With clear standards and guidelines, AI developers and users can be held accountable for the actions of AI systems leading to increased public trust in the technology and facilitating its responsible use across different sectors.
2. Legal liability and regulation of artificial intelligence can stifle innovation and impede the development and deployment of AI systems. Overly stringent regulations and liability requirements can create a burden for AI developers and users, hindering their ability to bring new AI technologies to market. Additionally, the complexity of legal liability issues related to AI may lead to confusion and inconsistencies, making it challenging to determine who is ultimately responsible for AI system actions.

OBJECTIVE

The objectives of this research are:

1. To examine the existing legal framework for the protection of criminal justice system by Artificial Intelligence.
2. To encourage innovation and development.
3. To promote the fairness and non-discrimination.
4. To protect the privacy and data.
5. To establish effective governance structures for AI system.
6. To study about the problems with using artificial intelligence in law.

RESEARCH METHODOLOGY

A descriptive and analytical approach is used in the development of the paper. I shall also use primary data from official gazettes, treaties, conventions, codified laws etc. I have collected secondary data from various authentic books, articles, recommendations, commentaries, and conduct interviews of the representatives of governmental and non-governmental organization representatives working in this fields etc. Doctrinal approach will be followed in commenting upon the National, and International laws that are there to safeguard us from illegal activities apart of the study subjected in terms of the crime of India.

1. **Literature Review:** A comprehensive review of relevant academic literature will be conducted to provide a theoretical framework for the study. This will involve reviewing academic journals, books, government reports, and other relevant sources.
2. **Case Studies:** A number of case studies will be conducted to explore the legal framework for the protection. These case studies will involve analysing artificial intelligence and policies in specific developing countries, as well as the implementation and enforcement of these laws.
3. **Data Analysis:** The data collected from the literature review and case studies will be analysed using qualitative and quantitative data analysis techniques. This will involve analysing the data for patterns, trends, and relationships to draw conclusions and make recommendations.

REVIEW OF LITERATURE

1. Singh Anant Manish, paper ID. IJRASET44306, 2022-06-15 ISSN: 2321-9653 ARTIFICIAL INTELLIGENCE, in this journal researcher understand the aims to educate lay people about AI and encourage them to utilize it as a tool.
2. Srikanth G.R., the researcher study about the Artificial Intelligence (Chat GPT) and copyright laws in India.
3. <https://www.voyager-labs.com/artificial-intelligence-applied-in-the-battle-against-organized-crime/> October 2021, the researcher understand the criminal justice matter applicable with artificial intelligence.
4. Volume 7, November 2019 ISSN 2581-5504 www.penacclaims.com “Artificial Intelligence and Law” Adarsh G Hegde Bangalore Institute of Legal Studies, Bangalore. This paper examines artificial intelligence in the legal sector and how it is a boon and bane in the society.
5. Artificial Intelligence as a Challenge for Law and Regulation, January 2020, DOI: 10.1007/978-3-030-32361-5_1, In book: Regulating Artificial Intelligence (pp.1-29), Authors: Wolfgang Hoffmann-Riem and Bucerius Law School. It explores the types of rules and regulation.
6. Chawla, Monika, and Dua, Pooja. "Artificial Intelligence and Legal Liability: An Indian Perspective." International Journal of Engineering and Advanced Technology, vol. 9, no. 2, 2020, pp. 1292-1297. explores this topic from an Indian perspective. It may discuss the legal principles and challenges associated with AI-related legal liability in India.

CHAPTER 2

AI CHALLENGES AND ISSUES

"IS TECHNOLOGY A BOON OR A BANE?" is a question that has persisted in the human psyche as humanity has evolved and revolved. In recent years, artificial intelligence has made enormous advances, altering the way we live and work. AI has already changed various industries, from self-driving cars to virtual personal assistants. AI also confronts various obstacles and issues that must be addressed for it to be developed and used responsibly.

Algorithmic transparency, cybersecurity vulnerabilities, unfairness, bias, and discrimination, lack of contestability, legal personhood issues, intellectual property issues, negative effects on workers, privacy and data protection issues, liability for damage, and lack of accountability are examples of such issues.

2.1 Artificial Intelligence and India

According to industry researchers, artificial intelligence might add \$957 billion to India's economy by 2035. The Government of India has launched numerous programmes and initiatives to grow the AI industry in India so that its full potential can be realised to advance the country's economic and social advancement.

- The Government of India unveiled the National AI Portal of India (<https://indiaai.gov.in/>) in May 2020, which is a one-stop digital platform for the country's artificial intelligence-related projects. The portal also serves as a knowledge-sharing tool, with articles, documents, and other resources for stakeholders to access. It can also serve as a forum for learning about AI careers.
- In addition to the aforementioned portal, the government has launched the Responsible AI for Youth programme. The program's goal is to provide young students with a platform and empower them with appropriate new-age tech mindsets, relevant AI skill-sets, and access to necessary AI tool-sets to prepare them for the future. Under this programme, chosen students (from grades 8 to 12) from central/state government schools around the country will participate in online training courses on AI and how to

identify and construct social impact initiatives with the use of AI. Based on this, students will submit their solutions via video, after which they will receive required training and support to bring their ideas to life and display them on appropriate channels.

- Global Partnership on Artificial Intelligence (GPAI). India will join the GPAI in June 2020. GPAI is a multi-stakeholder international initiative to oversee the responsible development and use of AI, with a focus on human rights, inclusiveness, diversity, creativity, and economic prosperity. The organization's goal is to bridge the gap between AI theory and practise.
- India's AI policy is known as "AI for All." It focuses on responsible AI and producing AI solutions at scale, with the goal of making India the world's AI garage — a trusted nation to whom the world may outsource AI-related work. It stresses inclusive development by utilising AI technologies.
- From 2020 onwards, CBSE has integrated AI into the school curriculum.

2.2 Global Developments in Artificial Intelligence (AI)

The economic and societal benefits of applied AI are well known around the world.

Between 2010 and 2016, universities and research institutes in the United States, China, and Japan dominated the publication volume on AI research issues in the domain of core research in AI and related technologies.

AI Governance arrangements have the potential to enable all of the above mandates across countries. Many countries have established specific public offices, such as the Ministry of AI in the United Arab Emirates and the Office of AI and AI Council in the United Kingdom, whereas China and Japan have permitted existing ministries to adopt AI in their sectoral areas. Artificial intelligence has the ability to add significant value to a wide number of industries around the world, and it is predicted to be the primary source of competitive advantage for businesses.

Healthcare: AI plays a crucial role in healthcare by tackling high-barrier concerns, particularly in remote areas with inadequate communication and a professional healthcare system. AI-driven diagnostics, individualised treatment, early detection of potential pandemics, and imaging diagnostics are some of the growing applications.

Agriculture: AI has a significant role to play in triggering a food revolution and fulfilling growing food demand. Applied AI solves issues such as unreliable irrigation, poor demand forecasting, and excessive use of pesticides, fertilisers, and fungicides. Improved crop output through better pest detection, crop price forecast, and real-time advise are some of the applications.

Transports, Logistics, and Smart Mobility: This area primarily consists of different autonomous and semi-autonomous characteristics, such as monitoring and maintaining a prediction engine in conjunction with driver-assist. Improved traffic management, autonomous trucking, and delivery are some of the other applications of AI.

Retail: It provides applications such as developing user experience through tailored suggestions, image-based product searches, and preference-based browsing as one of the early adopters of AI solutions. Other applications include anticipating customer demand, better inventory management, and efficient delivery management.

Manufacturing: It can enable the 'Factory of the Future' to respond to unfamiliar or unexpected events by making wise decisions by utilising flexible and adaptable technical solutions. Engineering, supply chain management, production, maintenance, quality assurance, and in-plant logistics and warehousing are all affected.

Energy: Artificial intelligence could also be used to model and anticipate the energy system in order to lessen unpredictability. Artificial intelligence is also working to improve the efficiency of power balancing and to enable energy storage in renewable energy systems. This method employs smart metres to enable intelligent grids, hence increasing the affordability and dependability of solar energy. Aside from this, AI could be used to predict grid infrastructure maintenance.

Smart Cities: Incorporating applied AI in developing cities could potentially help satisfy the demands of a fast rising population while also improving their quality of life. Some of the potential applications of AI systems include traffic control to reduce congestion and greater security through improved crowd management.

Education and Skilling: AI plays a significant role in the Indian education sector by addressing quality and access issues, such as augmenting and improving the learning experience through personalised learning, automating and expediting administrative tasks, and predicting the need for student intervention to reduce dropouts or recommend vocational training.

2.3 Challenges with AI in India

- There is a lack of collaboration among many parties.
- Concerns about data privacy and security, especially a lack of explicit regulation around data anonymization.
- Inadequate talent to create and deploy AI systems at scale. According to one estimate, only 4% of AI practitioners in India have worked on new technologies like deep learning and neural networks. In addition, there is a substantial shortage of Ph.D. research scholars in the discipline.
- Access to industry-specific data, which is essential to construct customised platforms and solutions, is now concentrated in the hands of a few significant businesses. It is difficult for newcomers to deliver personalised services that can compete with current data, which includes wealthy incumbents such as Facebook or Google. This dynamic creates a positive loop that maintains the predominance of the few, posing a significant barrier to entry for new businesses.
- The computational infrastructure required for the development, training, and deployment of AI-based services is expensive and scarce. Although cloud infrastructure is quickly expanding, it has limited capabilities.
- The main reason for many Indian AI start-ups aiming to incorporate their business outside the country is a lack of infrastructure, putting AI out of reach of Indian researchers in government labs and many enterprises. Initiatives such as GI Cloud (MeghRaj) are a step in the right direction.
- In most public organisations and government agencies, a lack of AI awareness in resolving business-related challenges has resulted in a scarcity of AI professionals, hindering implementation.

2.4 Way Forward to Harness the Power of AI

Instigating Core and Applied Research in AI: Advanced research, both fundamental and applied, serves as the foundation for the commercialization and application of any emergent

technology, particularly AI. A significant amount of time and effort is necessary to conduct extensive study on AI strategy for India.

Getting India Ready for the AI Wave: Through its strong IT industry and big youth population potential, India appears to be relatively well-positioned to capitalise on the disruption in the AI system and establish itself as the future centre for AI-related activity. However, given the scarcity of skilled teachers and researchers, this advantage might swiftly turn into a liability unless the government takes immediate steps to promote access to such capabilities. This is an important aspect of AI development that should be a national priority.

Accelerating Adoption: AI adoption in India has been delayed and continues to be limited. According to estimates, barely 22% of Indian businesses use AI in any business function. Government engagement is required to boost AI adoption, or else India may miss out on the opportunity to secure a prominent position on the global AI map. While recognising the need to develop AI, governments at all levels, together with their numerous agencies, should take proactive steps to speed AI adoption in a variety of procedures.

Ethics, Privacy, Security, and Artificial Intelligence: AI will be a watershed moment in humanity's technological growth, with humans' reliance on robots and algorithms for decision making never being greater. As a result, every strategy document promoting AI must be aware of the potential variables of the AI ecosystem that may undermine ethical conduct, infringe on one's privacy, and weaken the security protocol. Appropriate strategies to mitigate these risks must be included in any such approach. For example, the National Cyber Security Policy (NCSP - 2013) discusses sensitising residents, consumers, and employees to cybersecurity concerns as well as basic and best practises. Sensitization to the dangers of cyber-attacks and the implementation of security programmes.

These difficulties, if solved by relevant parties, with the government taking the lead, might lead to basic building blocks that constitute the basis of India's march toward AI leadership in a timely and collaborative manner.

2.5 ARTIFICIAL INTELLIGENCE IN NEWS –

- **‘Alexa records, shares private conversation¹.’** – A couple's private discussion was inexplicably captured and forwarded to one of their contacts by their Amazon Echo device, raising privacy concerns about the voice-activated devices that the online retailer hopes to make as popular in homes as TVs.

¹ The Times of India, Bengaluru May 26, 2018, Page 16.

- **‘Google, FB face first GDPR complaints²’** – As Europe's new privacy law went into force on Friday, one activist wasted no time in expressing the extra privileges it grants people over the data that firms seek to collect about them. Austrian Max Schrema filed charges against Google, Facebook, and WhatsApp, alleging that companies were acting illegally by compelling users to sign intrusive terms of service or lose access.
- **‘EU states agree to make search engine pay for news³’** – Under draught copyright rules approved by EU ambassadors on Friday, search engines such as Google and Microsoft's Bing could be forced to pay for showing snippets of fresh publications. The bill, which is not yet finalized, would allow press publishers to request that search engines compensate them for displaying their stories for up to a year after they were published.
- **‘Tesla hits parked police car, drive blames autopilot⁴’** – The driver of a Tesla Inc Model S slammed into an unoccupied, parked police vehicle in Laguna Beach, California, on Tuesday, according to authorities, and the driver told investigators that the Tesla was in 'Autopilot' mode at the time. Auto pilot is a semi-autonomous technology described by the firm as a type of improved cruise control.
- **‘India gears up for AI-driven wars⁵’** – The government has begun work on an ambitious Defence project to include Artificial Intelligence to significantly improve the operational preparedness of the armed forces, which would entail providing them with autonomous tanks, warships, aerial vehicles, and robotic armament. The move, which is part of a larger national initiative to equip the Army, Navy, and Air Force for next-generation warfare, coincides with expanding Chinese investments in artificial intelligence. According to military insiders, "the use of AI in border monitoring might greatly reduce the strain on armed forces troops protecting the crucial borders with China and Pakistan."
- **‘Google to scrap AI project with US Military⁶’** – When a contract to assist the US military in analyzing aerial drone imagery ends in March, Alphabet Inc's Google will not renew it. The Defence programmes, known as Project Maven, sparked a revolution

2 The Times of India, Bengaluru May 26, 2018, Page 16.

3 The Times of India, Bengaluru May 26, 2018, Page 16.

4 The Times of India, Bengaluru May 26, 2018, Page 16.

5 The Hindu, Bengaluru May 21, 2018, Page 11

6 Sunday Times of India, Bengaluru June 3, 2018, Page 13

within Google, as employees opposed Google Technology being used in conflict. The dissidents claimed it contradicted the company's professed objective of doing no harm and identified risks associated with utilizing fledgling AI technology in potentially fatal situations. Over 4600 employees signed a petition urging Google to cancel the agreement.

2.6 LATEST NEWS ON ARTIFICIAL INTELLIGENCE INDIA –

RAISE 2020, a major Artificial Intelligence conference, took place virtually in October 2020.

- The Ministry of Electronics and Information Technology (MeitY) and the NITI Aayog jointly organized RAISE 2020, or responsible AI for social empowerment 2020.
- Participants in the summit from the International AI sector discussed how AI may be used to advance India's vision and agenda for social transformation, inclusiveness, and empowerment.
- The massive gathering drew attendees from academics, business, and government.
- In RAISE 2020, a few chosen start-ups also presented their AI solutions.

The six news items that appeared in Indian news media over the course of 15 days raise ethical, moral, and legal concerns about AI. It is critical that those who develop or use AI consider the inherent dangers, especially legal issues.

There are essentially two viewpoints on AI –

- The first is Iain Banks' techno-utopian perspective in his "Culture" novels, which suggests that AI would make the future far better for humans, bringing us untold wealth and prosperity. According to a new McKinsey research report, AI is a factor in societal development. According to the report, the shift is ten times faster and three hundred times larger, or nearly three thousand times faster than the impact of the industrial revolution.
- On the other end of the spectrum, Stephen Hawking and Elon Musk projected that AI would be the greatest existential threat to humanity.

2.7 ARTIFICIAL INTELLIGENCE AND HUMAN RIGHTS

The argument in the AI field is between automation, in which the computer does everything, and augmentation, in which the machine assists the person in completing the task. The New

York Times best-seller *The Second Machine Age* argued that while digital technologies and AI are set to offer huge, good change, they also pose substantial risks. AI could take people's jobs. This will have societal and political ramifications in the future. According to a study published by researchers at the University of Oxford, 47 percent of total US employment is "at risk" due to cognitive task automation.⁷ According to a Deloitte report, technology is already causing job concerns in the UK legal profession, and 114,000 jobs might be automated within the next 20 years.⁸

In the Queens Law debate, Kay Firth-Butterfield stated, "The industrial revolution injured a lot of people over a long period of time; it appears that this industrial revolution will be much faster, and we need to plan not to hurt as many people as rapidly."

2.8 ARTIFICIAL INTELLIGENCE AND LABOR LAWS

Industrial Relations issues may arise because of AI implementation. Similar worries arose when computers were first introduced into offices.

"When AI is combined with huge data, the resulting solutions may inadvertently contradict with workplace laws, some of which were written 50 to 100 years ago," explains Garry Mathiason of Littler Mendelson.

Big data, for instance, demonstrates that the closer one lives to where one works, the longer one stays on the job. If such technologies are utilized to screen applications, those hired will live in locations near the company's headquarters. If the neighborhood's diversity is insufficient, a similar pattern will be reflected in its employee pool. Another problem is dealing with the liability of machines injuring a human coworker.

2.9 ARTIFICIAL INTELLIGENCE AND PRIVACY ISSUES

When computerized data processing became prevalent in the 1970s, privacy rules reappeared. "This person lives at this address, takes this type of cardiac medication, and has this type of insurance." Artificial intelligence can perform similar tasks on a far larger scale, affecting the lives of many people⁹. The Cambridge Analytica controversy has yet to be resolved. Nobody could have predicted that a seemingly benign Facebook survey might be used to affect poll

⁷ Schatsky, David Muraskin, Craig; Gurumurthy, Raghu (2014, November 4)

⁸ Sobowale, J. (2016, April)

⁹ Kingsman, M. (2017, January 30)

results in leading democracies. When a machine is used to interview possible job prospects while also measuring the person's blood pressure, privacy becomes an important consideration. "Artificial Intelligence (AI) technology is becoming more common, from virtual assistants like Siri and Alexa to self-driving cars and facial recognition systems." However, adopting AI technology presents privacy concerns, particularly regarding personal data, stated Bhaskar Ganguli, Director of Marketing and Sales at Mass Software Solutions.

AI systems frequently rely on massive amounts of data to train their algorithms and increase performance. Personal information such as names, addresses, financial information, and sensitive information such as medical records and social security numbers can all be included in this data. Concerns can be raised regarding how this data is collected and processed, as well as who has access to it.

The primary privacy problems with AI are data breaches and illegal access to personal information. With so much data being collected and processed, there is a risk that it will fall into the hands of the wrong people, whether through hacking or other security breaches.

"As Artificial Intelligence improves, it involves more personal information, increasing the number of incidences of data breaches." Generative AI can be abused by creating bogus profiles or manipulating photos. It, like all other AI systems, is data driven. Cybercrime threatens the security of 80 percent of businesses worldwide, and we recognize that personal data in the wrong hands can have disastrous consequences. We must take proactive steps to protect the privacy of our clients' information, such as leveraging data platforms for authentication." Infobip's MD for India, Bangladesh, Nepal, and Sri Lanka is Harsha Solanki.

"While AI has the potential to change our lives, it also raises severe privacy problems." As AI grows more popular, it could collect and analyze large amounts of personal data that may be utilized for a variety of purposes, both positive and harmful," stated Vipin Vindal, CEO of Quarks Technosoft.

"Ultimately, it is critical to support ethical AI development and deployment in order to reap its potential benefits while limiting dangers to human privacy and civil liberties." "Policymakers, industry leaders, and civil society must work together to develop regulations and practices that encourage the appropriate use of AI technologies," said Scott Horn, CMO of Enterprise DB.

2.10 ARTIFICIAL INTELLIGENCE AND IPR ISSUES

The tremendous commercialization potential of AI development will provide fertile ground for IPR-related lawsuits. When one considers Google or Facebook, one can see how their market

capitalization is strongly reliant on the AI-based underlying technology that these businesses utilize to offer products and services.

Taking the driverless car as an example, the ultimate result is an assemblage of numerous and diverse integrated systems manufactured by several firms. A driverless car requires sensors to overcome road obstacles, such as radar and laser detection, in order to function properly. It must have a computer to guide its actions, and that computer must have a logic framework within which to operate - both internally via the use of its own operating software and externally through the usage of map data. All of these systems must communicate properly, and this is without taking into account all of the regular mechanical components that comprise a standard car, which must also be present and functional¹⁰.

The issues around Intellectual Property Rights (IPR) are discussed under two headings.

1. IPR for AI
2. IPR for creations of AI

IPR for AI Creations¹¹

AI technology have also been the subject of patent litigation, and this trend is expected to continue. The first thing to ask is whether the AI subject matter at issue is patent-eligible under 35 U.S.C. 101. Courts considering this issue must first determine whether the claims of a patent are addressed to a patent-ineligible notion, such as natural laws or abstract ideas. A patent will be enforceable under this criteria if it is not addressed to such a notion.

However, if a patent's claims are directed to a patent-ineligible concept, the analysis proceeds to the next step, which is to determine whether the patent claims, despite being directed to a patent-ineligible concept, are still patent-eligible because they include a sufficiently "inventive concept."

In **Vehicle Intelligence & Safety LLC v. Mercedes-Benz USA, LLC¹²**, the court invalidated as patent-ineligible certain claims involving the employment of "expert system(s)" to screen equipment operators for impairments such as intoxication. First, the Vehicle Intelligence Court ruled that the claims at issue were oriented to a patent-ineligible concept—"the abstract idea of

¹⁰ Buyers, J. (2015, January)

¹¹ Emanuel; Quinn; (2016, December)

¹² 635 F. Appex 917 (Fed. Cir. 2015), cert. denied, 136 S. Ct. 2390 (2016),

checking operators of any form of moving equipment for any kind of physical or mental impairment."

The concept of "expert system" was deemed abstract because, according to the definition assigned to it by the Court during claim construction, it was something done by humans in the absence of automation, and also because "neither the claims at issue nor the specification provide any details as to how this 'expert system' works or how it produces faster, more accurate, and reliable results." This lack of clarity contributed to the second step holding of lack of innovative concept, rendering the patent claims at issue unlawful. According to the Federal Circuit, the patent is analogous to "a police officer field-testing a driver for sobriety." In **Blue Spike, LLC v. Google Inc**¹³, the Court found that because the patents at issue sought to model on a computer "the highly effective ability of humans to identify and recognise a signal," the patents simply cover a general-purpose computer implementation of "an abstract idea long undertaken within the human mind." The Blue Spike Court further determined that the second part of the eligibility examination for "inventive concept" was missing because the claims "include a wide range of comparisons that humans can, and indeed have, made since time immemorial."

The Northern District of California District Court has evaluated the patentability of driverless cars and automated support programmes. Judge Freeman ruled in **Hewlett Packard Co. v. Service Now, Inc.**¹⁴, that HP patents were directed to the abstract idea of "automatic resolution of IT events" and were therefore not patent-eligible. Judge Freeman reviewed self-driving car inventions in the context of patent eligibility while rejecting evidence of economic success as evidence of a "inventive concept."

She noted that, while a self-driving automobile may be highly financially successful, new, and obscure, the concept of a self-driving car remains vague. As a result, while an inventor "may be entitled to patent his precise implementation," Judge Freeman rejected that the concept of self-driving automobiles could be patented in its entirety. While Judge Freeman's hypothetical is most likely dicta, it serves as a guidepost for self-driving car patent eligibility.

IPR for creation of AI¹⁵

Another controversial topic for litigation in patent disputes involving AI technologies is the assessment of inventorship. The subject of whether AI may claim inventorship is intriguing. It

¹³ No. 14-CV-01650-YGR, 2015 WL 5260506, at 5 (N.D. Cal. Sept. 8, 2015), *aff'd*, 2016 WL 5956746 (Fed. Cir. Oct. 14, 2016)

¹⁴ No. 14-CV-00570-BLF, 2015 WL 1133244 (N.D. Cal. Mar. 10, 2015)

¹⁵ Emanuel; Quinn; (2016, December)

is widely accepted that an inventor may employ "the services, ideas, and assistance of others in the process of perfecting his invention without losing his right to a patent."

Hess v. Advanced Cardiovascular Sys¹⁶, Furthermore, Section 103 of the United States Patent Code states that "patentability shall not be nullified by the manner in which the invention was created." This indicates that the use of AI in the inventive process cannot be used to deny patentability. The patent statutes, on the other hand, define "inventor" as "the individual... who developed or discovered the subject matter of the invention," and joint inventors as "two or more persons" who thought of the idea, 35 U.S.C. 100 and 116 (a).

The Federal Circuit has explicitly prohibited legal entities from gaining inventorship status because "humans, not firms," conceive **New Idea Farm. Equip. Corp. v. Sperry Corp**¹⁷.

The US Copyright Office has already announced that it "will not register works produced by a machine or mere mechanical process that operates randomly or automatically without any creative input or intervention from a human author." U.S. Copyright Office, The Compendium of U.S. Copyright Office Practices¹⁸.

The 2014 edition of the Human Authorship Requirement was partly inspired by a public debate concerning non-human authorship sparked by the "Monkey Selfies" **Naruto et al v. Slater**¹⁹.

¹⁶ 106 F.3d 976, 981 (Fed. Cir. 1997).

¹⁷ 916 F.2d 1561, 1566 n.4, (Fed. Cir. 1990).

¹⁸ 306 (3d ed. 2014); see also U.S. Copyright Office, The Compendium of U.S. Copyright Office Practices § 202.02(b) (2d ed. 1984), available at <http://copyright.gov/history/comp/compendium-two.pdf> ("The term 'authorship' implies that, for a work to be copyrightable, it must owe its origin to a human being.").

¹⁹ No. 3:2015-cv-04324, 2016 WL 362231, *1 (N.D. Cal. Jan. 23, 2016).

CHAPTER 3

ARTIFICIAL INTELLIGENCE AND LIABILITY

When artificial intelligence replaces human professional judgement, it may result in a rise in lawsuits involving complicated problems of causality, legal duties, and culpability. Autonomous robots pose new problems to our traditional liability models, which are mostly causal in nature. It will be difficult to determine if a machine's behavior was caused by natural complexity or acquired behavior. It is extremely difficult to attribute "fault" or "defect" for liability purposes. The law will need to adjust and meet the new technological evolution.

3.1 LIABILITY

Liability is essentially a sliding scale based on the degree of consequential legal obligation society places on an individual. As we will see later, historically, responsibility and thus liability levels are not static; the able-minded, children, and mentally incapable adults all have different levels of liability, with the latter having little or no responsibility for their actions and thus a commensurate degree of accountability and liability. There are distinctions between time and place. Minors' contractual obligation, for example, varies between India (Indian Contract Act, 1872) and the United Kingdom.

Until recently, the question of whether or not a machine should be held accountable (and so liable) for its conduct was rather straightforward - a machine was simply a tool of the human utilising or running it. There was no way a machine could assume personal accountability or even "personhood" because they were incapable of autonomous or semi-autonomous activity.

3.2 ARTIFICIAL INTELLIGENCE LIABILITY

In the case of AI systems, the sliding scale ranges from AI as a passive agent or slave to AI personality. The position of the AI machine on the sliding scale is determined by its level of intelligence. At the most basic level, there are machines that may respond to environmental stimuli and make restricted pre-defined judgments in accordance with programmed software criteria. At the present, this is the "state of the art." One will reach the other end of the spectrum

once self-aware computers are capable of learning and making independent decisions that are not clearly traceable to its programming.

To use an analogy, you can currently get into a Google Car and it will (quite effectively) drive you from point A to point B while avoiding traffic collisions based on its programming and inputs from its satellite navigation systems and radar, but you still cannot have a rational conversation or argument with it.

3.3 FRAMEWORK

Current liability frameworks that can be used to fix culpability for AI acts are characterised as follows.

- Liability based on Respondeat Superior
- Vicarious liability or agency theory
- Strict Liability
 - a. Tort – negligence
 - b. Contractual product liability
 - c. Strict liability provisions from Consumer law
 - d. Dangerous activities
- Common enterprise liability
- Criminal liability

The next sections will go through the extent, reach, and restrictions of each of the aforementioned. The possible challenges associated with their application to AI systems are also being investigated. Clearly, the most traditional analysis applicable to intelligent or semi-intelligent robots as complex products.

Tort – Respondeat Superior Liability

The "Master-Servant Rule"²⁰ is another name for the Respondeat Superior (Latin for "let the master answer") rule. The praetorian law of ancient Rome created this restriction. Praetor's Edict allowed for claims against slaveholders based on duties stemming from transactions involving a slave who was personally involved in commercial activity.

Both AI and the slave are objects of law, not subjects of it. They were unable to apply to the courts because only free people may engage in litigation. Assuming that there is a legal connection between AI's legal status and that of slaves, it might be said that damages caused by AI's actions should be reimbursed by its owner, AI developer, or the legal person on whose

²⁰ Paulius, C., Grigien, J., & Sirbikyt, G. (2015)

behalf it operates. This meant that the person (head of home) responsible for individuals *alieni iuris* (subordinate slaves), i.e. their owner, was held guilty for the slaves' torts.

3.4 – VICARIOUS LIABILITY

The duty that makes the defendant liable for the torts committed by another is known as vicarious liability. The person is held liable not for his own incorrect behaviour, but for his relationship with the tortfeasor. By viewing robots as tools, the responsibility for AI's behaviour falls on their owners or users.

If AI negotiates and enters into a contract with the counterparty C on behalf of the principal P, the rights and duties established by AI immediately bind P. All AI acts are regarded to be P acts. P cannot avoid accountability by claiming that she did not intend to enter into such a contract or that A committed a critical error..

The foundation of agency law is vicarious liability. It provides a viable framework for addressing the harms caused by the future generation of intelligent software; an agency relationship is formed when the software licensee installs and then executes the software programme. As a result, intelligent software agents could be governed by agency law. A software licensee will need to activate software for whatever reason. The intelligent software agent will then employ its learning, mobility, and autonomy to perform specific tasks for the licensee. As a result, the software agent plays the legal role of "agent," and the software licensee plays the legal function of "principal." This agent/principal connection exists whether or not the parties planned to create an agency or even consider themselves to be agent and principal²¹. Machines are recognised as participants in typical consumer transactions under e-commerce rules. According to Article 12 of the United Nations Convention on the Use of Electronic Communications in International Contracts, the person (whether a natural person or a legal organisation) for whom a computer was designed is ultimately accountable for any communication generated by the machine. This view follows the basic rule that the principal of a tool is liable for the results gained by using that instrument because the tool lacks independent will. Electronic contracts in India have legal validity under sections 10A and 11(c) of the Information Technology Act, 2000. The phrase 'by an information system programmed

²¹ Paulius, C., Grigien, J., & Sirbikyt, G. (2015)

by or on behalf of the originator to operate automatically' in section 11(c) makes it clear that an information system can be configured on behalf of a human being.

Intelligent software agents will have the ability to cause harm. They will be able to find their own sources of information and make promises, including unauthorised commitments, unlike previous software agents. Once intelligent software agents are recognised as legal agents in an agency relationship, liability can be assigned to the software agents' activities, thereby tying the software licensee (principal) to legal duties.

Claims utilising analogous automated technology can be analysed to give a basis for developing AI jurisprudence²². A ruling in a combined class action in the District Court for the Eastern District of Missouri, for example, determined that the use of a computer programme to replicate human interaction could give rise to fraud liability. **In re Ashley Madison Customer Data Sec. Breach Litig**²³.

The claims were based on allegations that defendants engaged in deceptive and fraudulent behaviour by creating fake computer "hosts" or "bots" that were programmed to generate and send messages to male members under the guise that they were real women, inducing users to make purchases on the website²⁴.

There is precedent for surgical robot safety lawsuits, with all claims continuing on some type of agency theory rather than asserting that the robot itself carries blame.

Current agency rules may not apply when an autonomous machine determines for itself what course of action to follow, and the agency relationship breaks broken. A principal is liable for an agent's activities only when the agent is working within the extent of his or her employment. When AI programmes become more adaptive and capable of self-learning, courts will have to decide whether they can be subject to a unique variation of agency law.

Product Liability

Product liability is divided into three categories²⁵:

- tort (negligence),
- contract law, and
- strict liability under consumer protection legislation (in the UK the Consumer Protection Act 1987).

²² Croft, J. (2016, October 6)

²³ 148 F. Supp. 3d 1378, 1380 (JPML 2015).

²⁴ Emanuel; Quinn; (2016 December)

²⁵ Buyers, J. (2015, January)

Negligence in Product Liability

In tort, product liability refers to a breach of a duty of care caused by negligence. Tortious responsibilities and contractual liabilities can coexist since the important case of **Donoghue v. Stevenson**²⁶. The essence of the case was that if a consumer purchases a product in a form intended to reach him or her without the possibility of reasonable intermediate examination and with the producer's knowledge that the absence of reasonable care in the preparation of the product will result in reasonably foreseeable personal injury or property damage, then the producer owes a duty to take reasonable care in their production. **Donoghue v. Stevenson** It was about decaying snails in ginger beer bottles. It is easily extrapolated to liability analysis in a driverless automobile or a surgical robot.

Products responsibility appears to be the most evident tort liability theory that appears to be applicable to damage caused by artificially intelligent creatures. Product liability is the legal area in which manufacturers, distributors, suppliers, retailers, and others who make items available to the public are held liable for the harm caused by those products. Artificially intelligent beings will probably be created by a firm, and the company may be held accountable if an AI fails²⁷.

When an AI produces a damage that was reasonably foreseeable to the maker, the manufacturer may be held accountable under a negligence cause of action. A typical prima facie negligence claim requires an injured plaintiff to demonstrate that

- (i) the manufacturer had a duty to the plaintiff;
- (ii) the manufacturer breached that obligation;
- (iii) the breach constituted the actual cause of the plaintiff's suffering;
- (iv) the breach proximately caused the plaintiff's injury; and
- (v) the plaintiff experienced actual quantifiable injury (damages).

Alternatively, a producer may be held solely responsible for any harm caused by its product. Strict responsibility does not require proof of carelessness, therefore a maker may be held accountable even if it used reasonable care. As a result, the emphasis of strict responsibility will be primarily on whether the flaw in the manufacturer's product caused the plaintiff's injury. The negligence liability framework is causative in nature; it is primarily fault based. The claimant must demonstrate that the defendant owed him or her a duty of care, that they failed

²⁶ 1932

²⁷ Friedman, D.

to meet that standard, and that injury resulted as a result. Tort-based damages, as opposed to contractual damages, are awarded on the basis of putting the injured party in the position they would have been in if the tort had not occurred.

In tort, the extent of potential culpability is broad. It could also apply to manufacturers, producers, and anybody else directly involved in the production and distribution of a defective product. You must prove that a duty of care exists and was breached, and that the relevant chain of causation is not broken by the damage being too remote.

There are several drawbacks to this liability framework. The high-water mark in **Junior Books v. Veitchi**²⁸ must be met in order to claim damages for pure economic loss in tort. There are just a few instances when this is conceivable, such as when surveyors provide negligent advice. Contributory negligence can also be used as a defence to responsibility if it can be demonstrated that the claimant should have known of the defect but negligently failed to recognise it, carelessly used the product, or failed to follow its operating instructions. In such circumstances, the damages are reduced to a level proportionate to the claimant's carelessness.

In **Ferguson v. Bombardier Service Corp**²⁹, When the court found equal credibility in the defence allegation that the plane's loading was improper, causing a powerful gust of wind to cause the plane to crash, the court rejected a manufacturing defect claim against the maker of an autopilot system in a military cargo jet. Even instances determined nearly fifty years ago influence current legal thinking on the issue of liability for automated systems. In **Nelson v. American Airlines, Inc.**³⁰, The Court used the *res ipsa loquitur* doctrine to find an inference of negligence by American Airlines relating to injuries sustained while one of its planes was on autopilot, but ruled that the inference could be rebutted if American Airlines could show that the autopilot did not cause the accident or that the accident was caused by an unpreventable cause.

Volenti non fit injuria – or voluntary assumption of risk is less prevalent in product liability lawsuits - on the grounds that if a claimant is aware of the fault, they are less likely to use it, and if they do, the causation chain between defect and damage is usually broken.

Finally, due to knowledge asymmetry, proving liability in tort can be extremely difficult, particularly in product liability instances. The defendant frequently holds the details essential to establish responsibility.

Product Liability through Contract

28 (1983) 1 AC 520

29 244 F. App'x 944 (11th Cir. 2007)

30 70 Cal. Rptr. 33 (Cal. Ct. App. 1968)

The contract undoubtedly plays a role in evaluating product-based liability. Contracts ensure that manufacturers and retailers sell products that adhere to contractually agreed-upon standards. Contract liability is obviously intended at the recovery of money (or pure economic) loss as a result of a breach of certain contractual norms, but as we all know, contract liability can also lead to the collection of damages for consequential loss and/or harm in some cases. Contract conditions might be express - in terms of flaws and warranties - or implied. In the United Kingdom, implied terms of quality, fitness for purpose, title, and description are included in the Sale of Goods Act 1979 (for B2C contracts) and the Sale of Goods Act 2015. (for C2C and B2B contracts). Although the Sale of Goods Act does not specifically address "defects," there is a clear emphasis on conformance with description. That may be argued to be virtually the same thing: a failure to adhere to a description or specification is very similar to a "fault" in practise. In India, similar legislation exists in the form of the Sale of Goods Act of 1830 and the Consumer Protection Act of 1986.

Strengths and weaknesses of contract liability

A contract is a liability structure based on causation. To establish liability, the Claimant must demonstrate that there was a violation of either an express or implied contract and that the breach caused the loss. Causation is an important factor in evaluating responsibility, according to **Hadley v. Baxendale**³¹.

Damages are the primary remedy for breach of contract (as assessed to put the innocent party in the position they would have been had the contract been correctly performed). The primary benefit of contract liability is that the contract counterparties can specify the scope of the contract responsibilities and obligations as between them (and hence the liability) if something goes wrong. This means that the agreement can be tailored to the functions and performance of the AI system in question.

The main disadvantage of contract responsibility is that it is not an obligation that applies to the "whole world," but rather one that is limited by contract privity. Contractivity implies that duties can only be enforced by contract counterparties. Some nations have limited exceptions, such as the Contract (Rights of Third Parties) Act 1999 in the United Kingdom. It is feasible to imagine a contract relationship arising from your use of intelligent systems.

There has also been a lot of debate about the safety of surgical robots³², particularly the "da Vinci" robot made by Intuitive Surgical, Inc. **O'Brien v. Intuitive Surgical, Inc**³³, while

³¹ (1854) EWHC J70

³² Emanuel; Quinn; (2016 December)

³³ No. 10 C 3005, 2011 WL 304079, at *1 (N.D. Ill. Jul. 25, 2011)

manufacturers of medical equipment and devices can be held liable in product liability actions, the learned intermediary doctrine results in the manufacturer having no duty to the patient, preventing plaintiffs from suing medical device manufacturers directly. **Banker v. Hoehn**³⁴, This liability framework makes it difficult for patients to prevail in product liability disputes involving medical devices. Users of AI systems may encounter the same problem.

Although the court said in **United States v. Athlone Indus., Inc**³⁵, that "*robots cannot be sued*," it is important to note that this decision was given in 1984.

The court was requested to determine a dispute over the meaning of "impressions," a crucial term in Internet advertising, in a case involving an internet advertising breach of contract action. **Go2Net, Inc. v. C I Host, Inc**³⁶, The Go2Net Court ruled that the parties' contract allowed visits by search engines and other "artificial intelligence" agents, as well as human viewers, to be counted as "impressions" by the advertiser.

Personal harm cases involving automated equipment have also been litigated. Cases have included workers' compensation claims or claims against manufacturers by workers hurt on the job by robots. **Payne v. ABB Flexible Automation, Inc**³⁷, **Hills v. Fanuc Robotics Am., Inc.**³⁸.

There is a lack of consistency in contractual standards in connection to contracts for the sale of products, making the framework's application difficult.

Product Liability in the Context of Consumer Law³⁹

Finally, in terms of product responsibility, the United Kingdom has the Consumer Protection Act 1987 (now the Consumer Rights Act 2015), which implements the EU directive (85/374/EC) on Product Liability. This Act establishes a strict liability system without affecting the general availability of contract and tort-based remedies. The Act states that a person who is hurt or whose personal property is damaged by a product may file a claim against the product's manufacturer or supplier (as well as certain other third parties) if it can be demonstrated that the product was defective. There is no necessity to prove wrongdoing on the side of the maker, but the claimant must clearly show that the defect existed by a majority of the evidence. According to the Act, a fault exists when "the safety of the product is not such as consumers

34 278 A.D.2d 720, 721, 718 N.Y.S.2d 438, 440, for (2000).

35 746 F.2d 977, id. at 979 (3d Cir. 1984)

36 115 Wash. App. 73, (2003)

37 116 F.3d 480, No. 96-2248, 1997 WL 311586, *1-*2 (8th Cir. 1997) (per curiam) (unpublished table decision);

38 No. 04-2659, 2010 WL 890223, *1, *4 (E.D. La. 2010)

39 Buyers, J. (2015, January)

normally are entitled to expect." S3(1)10. Consumer expectations are judged on their reasonableness.

According to UCLA professor John Villasenor and others, product responsibility might cover any autonomous car accidents.

The Consumer Protection Act has numerous advantages. There is no necessity to demonstrate guilt or privity; the rule provides for a wide range of potential responsibility targets, including suppliers and manufacturers. There are still some issues with consumer product liability. Causation still remains, but it is limited to the detection of flaws and is controlled by a customer expectation test. The Act is intended to protect claims for actual damage and does not cover claims for pure economic loss.

In the context of AI, there are further issues with the Act's definition of "Product." "Any goods or electricity, including products aggregated into other products, whether as component parts, raw materials, or otherwise," according to the definition. The Act does not specify whether software and/or other intellectual products are included in the definition of its scope. Under English law, disembodied software is not considered a "good," yet there is an argument that includes software embedded in functional hardware. The Indian Consumer Protection Act of 1986 defines a client as "any individual who buys any goods for a consideration S2d(i) or [hires or avails of] any services for a consideration S2d(ii) and so is not subject to this limitation."

There is also the "developmental risks defence," which gives the maker a defence "where the scientific and technological knowledge at the time the product was made was not such that a producer of a similar product could have discovered the flaw." This is obviously very important to our current topic, which invariably involves the "state of the art" in machine development.

According to Section 9 of the Consumer Rights Act 2015, where products are supplied "in the course of a business," there is an implied requirement that the goods be of adequate quality and suited for a purpose that the buyer has disclosed to the seller. Products are of satisfactory quality if they satisfy the criteria that a reasonable person would judge as satisfactory, taking their description, price, and any other relevant conditions into account. In other words, contract implied phrases can be used to build a customer expectation test. Higher standards apply to contracts made with consumers for public policy reasons - the Consumer Rights Act 2015 requires that any "public statements on the specific characteristics of the goods made about them by the Seller or the producer" be taken into account when determining whether products are of satisfactory quality.

Common Enterprise Liability

This intricacy creates a potential slew of culpability targets, ranging from the vehicle manufacturer to the designer of a single component, depending on where the actual defect, error, or breach occurs. Existing causative responsibility models function well when computer functions (and thus responses) can be linked back to human design, programming, and understanding. When this is not possible, they begin to fail.

One alternative is to require severe liability (addressed later) for automated system manufacturers. If there is no strict liability, a court may find itself in unfamiliar territory, having to decide how to best evaluate the comparative liability of AI algorithms and drivers in the event of autonomous vehicles. The existing law's approach, albeit dated, would make the vehicle's manufacturer liable and allow the manufacturer to seek indemnification or contribution from other parties, if any, who may be involved.

Another option is to graft the Common Enterprise Doctrine onto a new severe liability regime⁴⁰ to distribute blame across a group of people. **David C. Vladeck** proposes that each entity within a group of interconnected legal persons may be held jointly and multiply/severally accountable for the activities of other entities in the group. Such responsibility theory does not need that the individuals collaborate; simply working toward a common goal, such as designing, programming, and manufacturing an AI, would suffice.

The Federal Trade Commission, for example, frequently cites the "common business" doctrine in the realm of consumer protection to seek joint and multiple liability among linked companies engaging in fraudulent conduct. **FTC v. Network Servs. Depot, Inc⁴¹.**, **SEC v. R.G. Reynolds Enters., Inc⁴².**, **FTC v. Tax Club, Inc⁴³.**

3.5 CRIMINAL LIABILITY

According to CNBC⁴⁴, an incident involving online "bots" occurred when a Swiss art group set up a "automated online shopping bot" that was given a weekly allowance of \$100 worth of Bitcoin—an online cryptocurrency—and programmed to purchase random items from the "dark web," where shoppers can buy illegal/stolen items. The Swiss authorities confiscated the

40 Paulius, C., Grigien, J., & Sirbiky, G. (2015)

41 617 F.3d 1127 (9th Cir. 2010)

42 952 F.2d 1125 (9th Cir. 1991);

43 994 F. Supp. 2d 461 (S.D.N.Y. 2014).

44 Kharpal, A. (2015, April 21)

robot and its unlawful purchases to date in January 2015, but did not prosecute the machine or the artists who designed it with any crime. Similar cases are likely to occur in both criminal and civil courtrooms in the near future.

- If AI may commit crimes, a few intriguing questions must be addressed⁴⁵.
- Can society hold robots criminally liable?
- How may AI beings meet both the actus reus and mens rea requirements of criminal liability?
- How do you punish an AI robot if AI is criminally liable?

Actus Reus - the criminal act or conduct - and Mens Rea - the criminal intent or criminal mind - knowledge or general intent in regard to the conduct element - are two elements of criminal responsibility that must coincide in the guilty actor for liability to be established. To establish criminal culpability, both factors must be present at the same time.

The actus reus requirement is mostly communicated through acts or omissions. Other factual aspects, such as the precise outcomes of that activity and the exact circumstances underlying that conduct, are sometimes necessary in addition to conduct.

There are many levels of mental aspects in the mens rea criterion. Knowledge expresses the greatest level, which is sometimes coupled by a necessity of intent or explicit aim. Criminal negligence or "recklessness" (a reasonable person should have known) or strict liability offences indicate lower degrees.

Gabriel Hallevy claimed that AI entities can satisfy the two elements of criminal culpability under three different criminal liability models⁴⁶:

The three liability models are:

- (i) the Perpetration-by-Another liability model;
- (ii) the Natural-Probable Consequence liability model; and
- (iii) the Direct responsibility model.

⁴⁵ Friedmann, D.

⁴⁶ Hallevy, G. (2010)

CHAPTER 4

ARTIFICIAL INTELLIGENCE AND CORPORATE LAW ISSUES

AI is changing the way lawyers and legal departments work. Machine learning is already widely utilised in legal studies and can help anticipate lawsuit outcomes. AI is now being used to boost productivity in a variety of fields. AI handles activities such as writing lower-exposure or lower-liability agreements such as NDAs (Non-Disclosure Agreement). All of this frees up time for lawyers to focus on more complex jobs and cases.

Most sectors have incorporated artificial intelligence (AI), and the legal industry is no exception. AI is a type of computer that can execute tasks that would normally require human intelligence. Some specialists in the field have expressed reservations about AI for a variety of reasons. Some people believe AI is just a passing fad, while others believe AI will take over their jobs. Regardless, the use of AI in legal processes is rapidly increasing. And AI isn't being integrated into legal systems to replace lawyers. In fact, with the help of artificial intelligence, lawyers can boost their productivity by focusing on more complicated matters rather than wasting time on menial or tedious activities.

AI is changing the way lawyers in legal departments work. Machine learning and natural language processing (NLP) are already widely employed in legal studies and help anticipate lawsuit outcomes. AI handles activities such as writing lower-exposure or lower-liability agreements such as NDAs (Non-Disclosure Agreement). AI also offers predictive coding, which analyses set of data to identify relevant documents in response to eDiscovery queries. AI is mostly used to compile data; when used effectively, predictive coding can save a significant amount of time because this data may contain previously administered clauses.

Understanding Artificial Intelligence in Corporate Law

AI is becoming increasingly popular in a variety of industries as a means of increasing production. Corporate law is no different. Law firms and professional services firms are attempting to make the best AI decisions for their company. AI is now used in a variety of ways in the legal profession. The following are some of the current legal applications of AI:

- Helping lawyers with due diligence and research
- Using analytics to provide new insights
- Assisting with Contract Lifecycle Management by automating creative procedures in legal practise

The legal industry is being transformed by NLP and AI. Richard Susskind, one of the UK's most eminent specialists on the interface of law and technology, is a vocal proponent of the use of AI. According to Susskind, "AI and other technologies are enabling machines to take on many of the responsibilities that many used to think required human lawyers, and this isn't slowing down." It appears to be unfolding at a rapid pace."

AI and its Current Applications

AI assist in these categories to help legal experts increase productivity:

- **Due Diligence**

Legal due diligence is the process of gathering, comprehending, and evaluating all legal risks associated with an M&A transaction. Litigators conduct due diligence by reviewing background material with AI technologies, which includes contract evaluation, legal research, and electronic discovery.

- **Prediction AI**

This type of AI programme can forecast the outcome of a lawsuit.

- **Using AI for Analytics**

AI compiles data points from previous case law, victory and loss rates, and then a lawyer judges the history to be used for trends and patterns.

- **Document Automation**

Many law firms employ software templates to generate filled-out papers based on data input.

- **Intellectual Property**

AI tools assist lawyers in assessing vast IP portfolios and extracting data insights.

- **Electronic Billing**

Billable hours for lawyers are calculated automatically.

There are conflicting views on AI, and law departments aren't the only ones debating its implications. Technology businesses at the forefront of AI approaches are ensuring workers across industries that AI is solely used to strengthen and augment individuals' capabilities, not to replace them. Ginni Rometty, CEO of IBM, and Satya Nadella, CEO of Microsoft, appeared at a World Economic Forum discussion on artificial intelligence in Davos, Switzerland. According to these technological experts, AI may augment human brilliance and generate even more opportunities to optimise efficiency and allow employees more time to breathe.

4.1 ARTIFICIAL INTELLIGENCE AND COMPETITION LAW ISSUES

Competition law is a branch of the law that aids in the regulation and restoration of market competition by prohibiting firms from engaging in anti-competitive behaviour. As the world proceeds toward the use of artificial intelligence in all fields, machines are gradually replacing physical labour in the workplace.

What are the competition's threats from artificial intelligence?

The expanding usage of AI in the industry, as well as the increasing reliance of end users on it, creates a great concern of market abuse, as the majority of these goods are held by very few giants, who nearly constitute a monopoly in their respective way.

Aside from that, artificial intelligence is a notion that has recently acquired traction in a wide range of fields. In a recent year, the German Cartel Office and the French Competition Authority published a report outlining the issues and risks that competition and antitrust laws confront as a result of the usage of algorithms.

How AI can be used to exploit competitors:

Messenger: Messengers, whether on Instagram, Facebook, WhatsApp, or any other platform, have become an integral part of our daily lives. Since the epidemic, the majority of communication has taken place via this service. As a result, there is a good chance that humans will use computers and the IT environment to better execute cartels in Messenger.

Aside from that, hub and spoke has a high risk of competition because a single algorithm is used by multiple customers to determine price.

The Predictable Agent, in which pricing algorithms act like agents and continuously adjust to one another's prices and markets, i.e. algorithm-enhanced conscious parallelism, and

Aside from Digital Eye, a potential anti-competitive scenario exists. When artificial intelligence (AI) is combined with increasing market transparency, the consequence is anti-competitive.

Given the 2002 Act's antiquated design, limiting collaboration amongst self-learning algorithms will be extremely difficult. This could be one of the most challenging assignments ever undertaken by competition officials.

However, competition law is vital in the data sphere because mergers such as Microsoft-LinkedIn, Facebook, Instagram, and Yahoo-Verizon require special attention from law enforcement agencies, which is why the potential of competition law cannot be ignored totally.

The introduction of artificial intelligence has encouraged competition law regulators to think about and discuss it more. This is due to the fact that if AI is driven by strict liability, it may be detrimental not just to Competition Law but also to disciplines such as Intellectual Property, Data Protection, Privacy, and Tort Law.

AI technology pose competition legal challenges in India:

AI enhances market alignment accuracy while minimising risk factors. International organisations, including the World Intellectual Property Organization, have applauded AI's growth. The Competition Act of 2002, which governs market competition in India, has a variety of objectives that market regulation must achieve. Here are a few examples:

- Elimination of practises that appear to be detrimental to market competitiveness.
- Market competitive nutrition and promotion on a global scale.
- Ensure market freedom and ethical trading practises.
- Consumer interests are being protected.

Important Case laws:

International cases:

Uber's founder defended himself in **Meyer v. Kalanick** by claiming that the algorithm's prices simply followed natural market movements. These modifications, however, were not detected and appraised by fallible human senses and brains, but rather by a perfected computer programme.

The decision in the Eturas case adds significantly to the concept of coordinated practises in the age of technology. The evidence given, according to the court, is capable of showing the existence of the parties' concerted practise. The parties were deemed to have implicitly consented to common anticompetitive behaviour for two reasons.

Considering subsequent behaviour, as well as the presence of a coincidental relationship between concentration and market behaviour. As a result, members of any entity cannot abdicate their duties and responsibilities because the AI system lacks human behaviour.

Indian scenario:

The case of **Rajasthan Cylinders and Containers Limited v. Union of India**⁴⁷, 2018 SCC Online SC 1718

⁴⁷ 2018 SCC Online SC 1718

The Supreme Court found that it is the Competition Commission of India's responsibility to ensure that market competition exists, that competition is healthy, and that market consumers benefit from the competition that exists.

In Google case:

Google was fined by India's Competition Commission for abusing its dominant position in the online search industry. According to the informant, Google's principal business of search and advertising is biased, which harms advertisers and, as a result, end consumers. It was also argued that Google is creating an unfair playing field by favouring its own services and partners over its vertical partners via manual manipulation of its search results.

In addition to the search service, it was claimed that Google provides a wide range of vertical search possibilities, including video. In addition to the search service, it was discovered that Google provides a wide range of vertical search services, such as video (through YouTube), news (via Google News), maps (via Google Maps), and so on.

It has been unequivocally stated that Google began integrating many of its vertical results into its organic search results in order to promote Google's own vertical search sites. As a result of this behaviour, when a user searches for the name of a song on Google, he obtains links to videos of that song from Google Video or YouTube, both of which are Google-owned businesses.

The Commission's two grounds against Google were preferential treatment in the search engine industry and discrimination against other companies' websites.

Google has access to a massive amount of personal information.

Finally, the Commission found that Google, as a search engine, must assume new duties and provide equal weight to all other firms without resorting to arbitrariness. There have been numerous such incidents like this around the country. Companies with mastery of artificial intelligence and access to massive amounts of data are expected to dominate the market.

In the process, several firms breached the requirements of the 2002 Competition Act. The Indian Competition Commission, like Google, has taken note of Amazon and Flipkart's activities. These internet apps have access to huge volumes of data for the sake of conducting market business, providing them an advantage over competitors who do not have access to similar types of data. Artificial intelligence has threatened the technological world's sovereignty. AI dangers are classified into three categories, as mentioned below:

- Market foreclosure
- New patterns and types of collusion have emerged.

- Price discrimination implementation strategies.

Many groups have asked the Indian Competition Commission to enable the use of artificial intelligence in Indian markets. Some of them are producing a host of issues, with only a handful of them being handled while others stay unresolved. Because these mergers are supported by data and Artificial Intelligence, the assumption that certain competitors will be eliminated from the market grows.

Current Position of CCI and Scope of improvement:

The present competition law system is still looking for solutions to challenges produced by algorithms and AI. The use of sensitive data by businesses leads in data protection violations, which is another aspect of competition law that must be addressed. The Artificial Intelligence system is responsible for making the market profitable, which attracts market participants. The sole issue is the lack of a system of laws and regulations to govern the use of artificial intelligence, which is now inadequate and desperately required.

- Increased transparency in how market corporations operate.
- Increased coordination among entities in order to publicise data used by firms to govern algorithms.
- Processing through computer programming to ensure that sensitive material that comes into question is ignored in order to avoid difficulties. This will also help competitors make judgements about the market's competitive prices.

4.2 ARTIFICIAL INTELLIGENCE AND IPR ISSUES

Intellectual property rights (IPR) are becoming an increasingly relevant concern as the area of artificial intelligence (AI) grows and advances. A variety of IPR challenges exist in the context of AI, ranging from patentability to copyright protection. In this post, we will look at some of the important issues and concerns surrounding AI and IPR. AI-related inventions' patentability One of the most important IPR concerns with AI is patentability. An invention must be unique, non-obvious, and beneficial in order to be given a patent. AI-related ideas might be complex and difficult to identify, raising concerns about their patentability.

The global adoption of artificial intelligence (AI) is increasing at an exponential rate. This surge Countries like as the United States and the United Kingdom have made concerted efforts to interpret existing laws in a way that includes the AI element. The copyright problem in the case of the selfie-taking monkey in the United States and the landmark Infopaq Case in Europe

analysed existing laws and the usage of terms such as "authorship" and "intellectual production" to analyse and reach a decision on IPR ownership. However, given the rapid adoption of AI in important applications, it is critical that appropriate legislation be enacted. This could also imply making significant modifications to the TRIPS agreement.

Sophia– Saudi Arabia gave citizenship to a humanoid robot in 2017. AlphaGo and Zero are two other astounding technological developments. These unexpected advancements have been made possible by Artificial Intelligence elements (AI). John McCarthy coined the term "Artificial Intelligence" during a conference in 1956. The word was used to describe the ability of computers to make decisions without human intervention through the application of algorithms and commands. Early philosophers predicted that machines would eventually outperform human intelligence.

It enhances the utilisation of existing applications so that they can be used to their full potential. For example, Siri was applied to new generation Apple devices to improve their quality and productivity. Roomba 980 is an AI model that is used for cleaning. Google's AI-powered forecasts through Google Maps, Autopilot capabilities in planes, ridesharing services, and so on are everyday instances of how AI is employed extensively.

Development of AI in IPR

"AI is the science and building of developing wise robots, particularly clever PC programmes," writes John McCarthy. Artificial intelligence has been around for over a century. The topic of robots and artificial humans was initially addressed in Greek mythology. Since then, there have been numerous significant advances in the field of AI, including the enhancement and development of Turing Tests, which test insight by Alan Turing, and ELIZA, a distinctive language used in PC preparation. Looking back, the last three decades have been crucial for AI.

During the Gulf War in 1991, US soldiers deployed DART. It was a tool for automated logistics planning and scheduling. STANLEY, a self-driving automobile, won the DARPA Grand Challenge in 2005. Sophia, a humanoid robot, became a Saudi citizen in 2017. This sparked the question of whether AI machines have the same rights as people. A San Francisco court judgement in the matter of **Naruto v. Slater**, often known as "The Monkey Selfie Case," dismissed copyright requests for a selfie-taking macaque monkey and also reflected the fight against AI. This case raised more questions than it answered.

United Kingdom

The Copyright Designs and Patents Act of 1988 defines the intellectual property rights of a creator, or the person who makes/creates a substance (the CDPA). When an AI or a machine develops a substance, the creator of the machine retains the IP rights under the CDPA, provided that the person is in direct control of the machine's operation with AI.

In cases when the substance is created by AI and there is no human creator, the IP rights will be owned by the person who creates the game plans that allow the work (AI) to be created. As a result, AI is not considered a creator under UK law.

United States of America

In the United States, the Copyright Act protects original expression but not the ideas behind those expressions. In the area of AI data protection, no specific provision has been made, however the Act specifies that a copyright requires "an original work of authorship." The author has been viewed as a person or human being by US courts, and so, for any copyright protection, there should be human input in the creative process when utilising AI. The AI being employed is seen as a tool for the copyright process.

China

In China, AI is defined as algorithms and data that are intellectual property protected. AI copyright in China covers not only the expression of the algorithm but also the compilation of data. A patent is utilised to protect the essential notion of AI. Furthermore, such methods will be protected by innovation patents rather than utility model patents. China has been able to put in place a better mechanism for AI protection. Though there are still issues regarding ownership, particularly in the situation of several stakeholders.

Japan

Japan has made significant progress in controlling AI with IPR. It had developed the 'AI Strategy 2019 AI for Everyone- People, Industries, Regions, and Governments (2019),' which focused on problem identification and future evaluation. It also amended Articles 30-4, 47-4, and 47-5 of its Copyright Act, introducing flexible limiting rules for technology such as IoT and AI. Furthermore, the database is protected by Copyright Act Article 12-2 (1), which provides that even if the entire database is protected, the rights of the creator of a work that forms a portion of that database will not be impacted. However, there are still questions over data ownership, and patent difficulties persist.

AI & IPR in India

India's development strategy includes a significant degree of technical advances, including AI. AI is being used in areas other than social media and entertainment, such as retail. From online shopping to the use of online automobile services, the country experienced fast technological transformation. The problems in a developing country like India are significantly more serious because the basic infrastructure needs to be changed. India has well-established patent and copyright laws.

However, there is no formal act or law that regulates AI. Existing rules do not address AI and are based on traditional intellectual property kinds such as books, creative writing, and discoveries. The scope of AI is far broader and must be dealt in a different manner than the current regime. Computer programmes, business techniques, and mathematical formulae are not deemed patentable inventions under the Patent Act of 1970.

Furthermore, the phrases 'patentee' under Section 2 (p) of the Act and 'person interested' under Section 2 (t) of the Act constitute a barrier to incorporating AI into its scope. The Act expressly excludes the patentee of any other individual who wishes to be human.

The Copyright Act has two key concepts that define the originality of a work under this Act: the Sweat of the Brow Doctrine and the Modicum of Creativity Doctrine. Because the law specifies that a minimum level of originality is also permissible, AI's original work can be included. However, under Section 2 (d) of the Act, the 'author' of the work is granted copyright rights. The author under this act is meant to be a human or legal person, which limits the idea of a computer being protected under this act.

The current system and rules are incompatible with the impending and even existing technological dynamics. In a country with the second largest population and the majority of people utilising social media and online commerce, it is critical that the laws be updated to reflect the new structure.

The new technologies include a variety of features, such as Amazon's AI product 'Alexa,' which is being utilised as a home security precaution to lock doors. In the event of a failure caused by AI confusion or misunderstanding, several problems arise, such as who would be held accountable? Is it possible to shift liability to the user? Furthermore, any new innovation based on the same algorithm or concept as the original may infringe on the rights of the original owner. This is a serious problem. On the one hand, it may deter start-ups from becoming imaginative, so undermining the entire purpose and existence of IPR in the first place, and on the other hand, it may result in a succession of litigation and chaos in the IPR sector.

Copyright and AI

The creator of a literary/artistic/musical work has copyright, which gives the creator exclusive rights to the work's sale/use/distribution.

The question in **Burrow Gilles Lithographic Co. v. Sarony** was whether an image could be accorded copyright protection because there was a conflict between creative and mechanical work. The court ruled that copyright protection can be granted to a product that is the result of a machine, which is therefore the result of human creation. It further limited their protection by noting that mechanical labour cannot be considered creative. As a result, awarding copyright for works made by AI systems would be problematic if a rigid method like this were applied to them.

In another similar decision, **Bleistein v. Donaldson Lithographing Co**, the court distinguished between human and artificial creations. Justice Holmes emphasised the importance of human nature in creating a copyrightable work. The Court highlighted that there was no possibility for copyrighting something that was not a product of man's ingenuity.

Even if countries agree to issue copyrights to AI works, the question of who receives such copyright remains ambiguous and abstract. This is because the existing legal status of a right holder requires legal personhood, which an AI lacks until its creator obtains it on its behalf.

EU & United States

To begin, a clear difference must be made between AI-created works and AI-assisted works. There is no protection in the former scenario since there is no human intelligence, whereas in the latter case, the copyright holder is the human who developed the substance. Furthermore, the condition that the AI's work be original is dubious. Works wholly composed of computer programme code are not protected and may be used by anybody.

UK

In contrast to EU and US practise, the computer-generated works (CGW) regulation is in place in the UK. The programmer of the AI software is the copyright holder of the machine's output under this regime.

Patents and AI

In today's world, AI-enabled systems are developing and inventing new outputs that are beyond the knowledge and understanding of their inventor, which is a huge advancement, but it also creates problems in patent law. A patent grants the creator the exclusive right to his innovation

(product/process) if it is unique, non-obvious, and valuable. The grant of a patent to the patent holder prevents others from creating, selling, or distributing the innovation without the patent holder's permission.

AI is booming to the point that AI-created computers are yielding results that may qualify as patentable innovations.

EU & United States

An 'inventor,' according to US law, is defined as an individual or a group of individuals who invented or discovered the subject matter of the invention. This definition precludes the United States from intending to patent AI inventions.

The European Union, on the other hand, is working to expand their national laws to include copyrightable works produced by computers and other devices/machinery under the category of 'own intellectual creation,' but no efforts are being made in this field with regard to patents by AI systems and robots.

UK

There are no provisions in UK law relating to the patenting of works made by AI software. In one case, a patent application was filed with the UKIPO, and Dr. Stephen Thaler's DABUS (patented AI system) (also known as the "creativity Machine") was named as the inventor. The UKIPO dismissed this application, noting that DABUS was a machine and not a living person, and hence DABUS' inventions will not be considered. The UK requirements require that the inventor be a human being, and the Hearing Officer in the case determined that there is no law that allows the AI creator to transfer ownership of the invention to the AI's owner.

Trademark & AI

Trademark law seeks to eliminate any uncertainty over a logo, appearance, or packaging, or any other markings that identify a specific brand or firm, so that consumers are not confused. It is difficult to determine how AI can infringe on a trademark, and difficulties similar to patent and copyright can occur. There have been situations where the issue of trademark infringement with regard to AI has arisen. In the matter of **Louis Vuitton v. Google** France, there was a dispute about keyword advertising and the automated choices made by Google, which were believed to infringe on the petitioner's trademark.

However, the court ruled that there is no infringement unless the party involved actively participated in it. The case of **Lush v. Amazon** highlighted the necessity to build trademark

rules for future concerns. Lush had refused to allow Amazon to sell its goods on its website. Amazon purchased the keyword 'Lush' through a bidding process. As a result, even if Lush was searched on Google, Amazon adverts would appear. Even if there were no sales on the website, the AI would continue to display related products based on the requested phrase. Lush filed a lawsuit for trademark infringement, and the court ruled Amazon guilty.

With the expanding usage of AI in retail and business models, as well as security and payment systems, this situation has the potential to deteriorate significantly. If there are AI-based consumers, the situation may worsen. AI is built on algorithms and makes use of data by identifying prior choices. If an AI becomes a consumer, there is a high likelihood of trademark confusion, which might result in extensive litigation.

There are no specific laws in any country in this regard, and it is urgent that specific restrictions be enacted to avoid more misunderstanding in the coming years.

If AI owns IP

When the AI owns the intellectual property rights to an innovation or work, problems about infringement arise. To begin, if AI is given the same status as a human for generating or inventing a work, it should also be allowed to enter the sphere of infringement and enforcement. An AI software should be able to sue for infringement and engage into legal contracts on its own, which does not appear to be practical or appropriate. This demonstrates that AI cannot be a legal entity.

Second, when an AI violates the rights of a third party, the issue of accountability arises. In the case of copyright, if an AI duplicates the work of an author, the hurdle of proving that the infringement had access to the protected work may be considerably easier to surmount, given that all works are available on the internet.

Third, there is a concern about the transparency of AI systems in terms of their ownership of intellectual property rights. If a situation emerges in which AI systems are protected by trade secrets, openness of the AI systems may be hampered. Transparency and accountability for decision-making processes are becoming increasingly important as time goes on.

4.3 ARTIFICIAL INTELLIGENCE AND LABOR LAW ISSUES

Working practises have already been altered by digital technology. With the introduction of Artificial Intelligence “AI”, we are only at the start of an unprecedented transformation that will affect not only the labour and employment markets, but also working relationships. Labour and employment law should be used as a legal tool to guide the clear changes brought about by artificial intelligence in the workplace. The issue is thus to find ways to adjust our labour and employment laws in order to anticipate and smooth the transition to the new reality.

During the US-EU Trade and Technology Council in late September 2021, both the US and the European Commission (EC) expressed strong interest in working on a joint study to assess the possible impact of artificial intelligence (AI) on our workforces. The Pittsburgh statement committed to a joint "economic research exploring the impact of AI on the future of our workforces, with a focus on outcomes in employment, salaries, and labour market opportunity dispersion." Through this collaborative endeavour, we hope to inform approaches to AI that are consistent with an inclusive economic policy that guarantees the advantages of technological advances are broadly shared by employees at all wage levels⁴⁸.”

According to a recent World Economic Forum report, artificial intelligence (AI) is anticipated to automate 75 million jobs globally by 2025, while producing 133 million new ones in their stead. This employment market revolution brings both challenges and opportunity for both workers and companies.

The impact of AI on the labour market will also be determined by how extensively and fast it is embraced and integrated into the workplace. According to a recent PwC analysis, 38 percent of US occupations would be at high risk of automation by the early 2030s.

AI's importance can be seen in social communication platforms, marketing digital equipment, brokerage websites, and so on. Uber, Ola, Swiggy, Big Basket, Amazon, and other similar technology have provided numerous benefits and disruptions to the job sectors. Autonomous processes, robotization, and dematerialization are some of the reasons that have contributed to the formation of the contemporary era of technology by making the employment of traditional methods obsolete. Because of the rapid growth of technology, the influence on the labour market is unfavourable. A big issue will be enormous unemployment, which will increase the number of poor people. This leads to a lack of financial opportunities as a result of poverty,

48 (White House 2021, European Commission 2021).

which is exacerbated by unemployment. Individual jobs will soon become obsolete, with numerous other jobs taking their place.

INTERNATIONAL ASPECTS OF LABOR LAWS AND AI

The establishment of an international collaboration was desperately needed for each and every nation to tackle their challenges and problems relating to labour. Another requirement was to eliminate social turmoil and to increase economic potentiality, which is critical for nations in order to attain future success or usefulness. The 1919 Paris Peace Conference was presided over by Samuel Gompers⁴⁹. The Commission on Labor Policy hosted the conference, which addressed the validity and necessity of labour legislation on a global scale. The Peace Conference advocated that the employer and employee-government be treated equally. This was reflected in the establishment of the International Labour Organization (ILO) in 1919⁵⁰.

International Labour Law Legislation

- a. International Labour Organization** - Following World War I, the International Labour Organization was created in 1919⁵¹. It paved the way for several social movements that advocated for social fairness and higher living standards for workers. The ILO framework is quite unique and has the equal power of government to raise a voice against the challenges that the working man faces. The International Labour Organization has a total of 193 member-states, each of which is represented by four representatives. They mostly cover issues with forced labour, the eradication of employment discrimination, labour promotion, labour inspection, dealing with migrant workers, working hours, wage structure for labours, and so on.

The International Labour Organization has offered numerous conventions and proposals for the application of certain principles. There are numerous international treaties concerning workers' rights.

- b. International Labour Standards (ILS)
- c. International human right treaties
- d. International conventions related to labour

⁴⁹ The International Labour Organization (ILO), creation Nations Encyclopedia

⁵⁰ Labour, Peace Palace Library

⁵¹ International Labour Organization, history NobelPrize.org. Nobel Media AB 2020, (8 Mar 2020).

International Legislations Related to Artificial Intelligence and Robotics

There are numerous international regulations in place to govern the growth of AI and new technical advancements in an ethical manner and to ensure the smooth operation of all sectors, particularly the job sector.

⇒ Policies given by United Nations

- UNICRI and Centre for Artificial Intelligence and Robotics:
- International Telecommunication Union:

⇒ Convention on Certain Conventional Weapons and Lethal Autonomous Weapons Systems

- CCW Informal Meeting of Experts (2013–2016):
- CCW Group of Governmental Experts Meetings (2017–2018):

United Nations and its Activities on Artificial Intelligence (AI)

There are many conventions, treaties, specialized agencies in international level for different purposes. This paper is going to discuss about these in a brief manner.

- Comprehensive Nuclear-Test-Ban Treaty (CTBT)
- Food and agricultural organization (FAO)
- International Maritime Organization (IMO)
- International Organization for Migration (IOM)

4.4 INDIAN ARTIFICIAL INTELLIGENCE AND ROBOTICS LEGISLATION

Status of AI under Indian Law

The Indian citizen must abide by the laws and regulations outlined in the constitution. However, there are no specific or unambiguous restrictions in the Indian constitution regarding AI. There were no proper rulings on the legal status of AI, its applicability, or the state of current laws' implementation. The significance and utility of AI have yet to be considered by Indian authorities. While recognising the benefits AI has brought to society, we must equally examine the drawbacks. The advancement of technology and artificial intelligence (AI) leads to the expansion of the Indian economy.

The Ministry of Commerce was in charge of administering and regulating certain suggestions and policies governing economic growth. The ministry of commerce's studies cover topics such as the importance of AI systems in India, the need for agriculture, manufacturing, and

agriculture, among others. It also concerns data collection technology, providing proper safety and safeguards, and privacy. They make specific recommendations to the Department of Industrial Policy and Promotion ("DIPP") in the study.

There are numerous statutes and laws that contradict the goal of artificial intelligence. In copy right law, a person who creates something with his own hands has a slew of rights over any other third party. In the case '**Eastern Book Company and Ors. v. D.B. Modak and Anr.**⁵²', it is said that a minimal amount of variation or adjustments are required for the protection of rights against the trespasser rather than expecting the whole variation. It states that meeting the 'modicum of creativity' is not required.

Legislation in India Concerning Labor Law

The Indian labour laws are the legal rights and rules that are offered to working people in India to ensure a harmonious relationship between employees and employers. If any disagreements or disputes emerge, the answer can be found in the labour laws. It primarily addresses health and safety, resolving conflicts between employers and employees, the minimum wage, and so on. There are two types of labour laws: collective labour laws and individual labour laws. The purpose of collective labour law is to keep the connection between the employer, the employee, and the labour union intact. Individual labour laws are used to protect the rights of employees at work.

- a. **Constitutional clauses concerning labour laws** - The dignity of human labour is well discussed in the Indian constitution, which also provides certain articles related to the same for the safeguard and protection of workers, which are Chapter-III (Articles 16, 19, 23 & 24) and Chapter-IV (Articles 39, 41, 42, 43, 43A & 54) of the Indian Constitution. Both the federal and state governments are authorised to take over and oversee the situation.
- b. **Labour policy of India** - The adoption of labour policy was primarily for the purpose of maintaining industrial peace and the welfare of workers. Labor policy is required because:
 - For more private and public investment.
 - More opportunities for jobs.
 - Social security for workers.
 - Maintaining the funds for labour welfare
 - For smooth employer-employee relationship.

⁵² AIR 2008

- Committees for labour in all sectors.
 - Special conciliation mechanisms.
 - Functioning of Labour Department
 - Medical and health facilities for workers.
 - To study changes in laws related to labour and employment sector.
 - To provide rehabilitation packages.
 - Balancing Law reforms and statutory amendments
 - To suggest required changes in laws and legislation.
- c. List of Labour statutes in India** - The labour statutes in India are primarily concerned with working conditions, wages, and worker welfare⁵³. The enactments are based on and derived from the Indian Constitution.

The main central laws dealing with labour issues are given below: -

1. Trade Unions Act, 1926⁵⁴
2. Industrial Disputes Act, 1947⁵⁵.
3. Payment of Wages Act, 1936⁵⁶
4. Minimum Wages Act, 1948⁵⁷
5. Payment of Bonus Act, 1965.⁵⁸
6. Factories Act, 1948⁵⁹.
7. Mines Act, 1952⁶⁰.
8. Motor Transport Workers Act, 1961⁶¹
9. Beedi & Cigar Workers (Conditions of Employment) Act, 1966⁶²
10. Contract Labour (Regulation & Abolition) Act, 1970.⁶³
11. Maternity Benefit Act, 1961⁶⁴
12. Equal Remuneration Act, 1976⁶⁵

53 Labour and Employment Laws of India, Page: 1-4

54 TRADE UNIONS ACT, 1926. ACT NO. 16 OF 1926

55 Industrial Disputes (Amendment) Act, 2010 (No. 24 of 2010).

56 THE PAYMENT OF WAGES ACT, 1936 (4 of 1936)

57 Minimum Wages Act, Act No. 11 of 1948

58 Payment of Bonus Act, 1965, 1965.

59 The Factories Act, 1948 (Act No. 63 of 1948)

60 Mines Act, 1952 (35 of 1952)

61 Motor Transport Workers Act, 1961 (No. 27 of 1961)

62 Beedi and Cigar Workers (Conditions of Employment) Act 1966 (No. 32 of 1966)

63 Contract Labour (Regulation and Abolition) Act 1970 (No. 37 of 1970)

64 Maternity Benefit Act 1961 (No. 53 of 1961)

65 Equal Remuneration Act 1976 (No. 25 of 1976).

13. Child Labour (Prohibition & Regulation) Act, 1986⁶⁶
14. Workmen's Compensation Act, 1923⁶⁷
15. Fatal Accidents Act, 1855⁶⁸

d. Case laws relating to Labour Law:

- **Ritz Hotel (Vegetarian), Pune vs E.S.I.C**⁶⁹. The court determined that there was no manufacturing process or activity in the hotel that used power, except for one refrigerator that was used to preserve milk and curd, and that the kitchen had no use of power for making eatables, so it could not be considered a factory preview because there was no manufacturing.
- **ESI corporation vs Raj keshaw**⁷⁰ Those allowances paid by employers are included in the salaries as described. Wages paid to employees during vacation time should be considered wages.
- **Employee's State Insurance Corp vs R. K. Swamy**⁷¹ The problem in this case was that the weather advertising agency could be classified as a shop preview. It was maintained here that because the advertising agency sells its competent and experienced services to clients, allowing them to conduct an effective campaign for his products, it can be considered a shop.
- **Mr. S C Sharma vs Employees State Insurance**⁷² In this case, a laid-off employee left the workplace after signing the layoff register, but while crossing the street, he was hit by a vehicle and incurred injuries, although this was covered under the course of employment as well as the basic idea of notional.

e. Certain case Laws:

- **Narkesari Prakashan Karmachari Sangh Vs. Shri Narkesari Prakashan Ltd. and Ors**⁷³. Shri Narkesari Prakashan is The respondent in this case sought permission to retrench 19 workers in the field of hand composing under Section 25-N of the Industrial Disputes Act. If a worker has been with the company for more than a year, he or she should be given three months' notice before being let off. They laid off about 19 people as a result of technological changes. The workers claimed that it was invalid because it violated Section 9-A (Notice of Change) of the Act. The appellate court determined that Section 9-A of the Act did not apply in this case.

66 Child Labour- Prohibition and Regulation Act, 1986. [Act 61 of 1986]

67 WORKMEN'S COMPENSATION ACT, 1923. ACT NO. 8 OF 1923

68 Fatal Accidents Act, 1855. (13 of 1855)

69 1995 (70) FLR 613, (1998) IILLJ 309 Bom

70 AIR 1991

71 AIR 1994

72 AIR 2011

73 [1999(81)FLR149], JT1998(7)SC509, (1999)IILLJ145SC

• **Batliboi Employees Union Vs. Respondent: Batliboi Ltd. and Ors**⁷⁴. Under the Industrial Disputes Act, the corporation chose to retrench 33 employees. Respondents presented contentions and jurisdictional problems. The problems were presented and covered by Item No. 10 of the Act's Third Schedule, which stipulates that regarding the referral of disputes to Boards, Courts, or Tribunals, the petition was disposed with by the court.

• **Hindustan Lever Limited Vs. Respondent: Hindustan Lever Employees Union and Ors**⁷⁵. The petitioner filed an unfair labour practise case under item 9 of Schedule IV of the Maharashtra Recognition of Trade Unions and Prevention of Unfair Labor Practices Act, 1971. Workers were assigned to departments such as hard soaps, sulphation, and packaging. Many issues emerged as a result of staff redeployment and non-payment of incentives. It amounted to a modification in their service terms. Redeployment is required to satisfy the business needs for the introduction of new technologies, as well as the introduction of new equipment and power systems. According to the answers, the staff have agreed to redeployment as well as the introduction of new machines and technology. Taking this into consideration, the respondent requests that the petitioner's case be dismissed. The court determined that the respondent engaged in unfair labour practise in violation of item 9 of the Act of 1971's fourth Schedule. The court judged the appeal to be without merit and dismissed it with costs.

4.5 ARTIFICIAL INTELLIGENCE AND INFORMATION TECHNOLOGY ACT, 2000

The simulation of human intelligence processes by machines, particularly computer systems, is known as artificial intelligence. In contrast to natural intelligence expressed by humans or animals, artificial intelligence (AI) is intelligence demonstrated by machines. Advanced web search engines, recommendation systems (used by YouTube, Amazon, and Netflix), comprehending human speech (such as Siri or Alexa), self-driving cars (e.g., Tesla), and playing at the top level in strategic gaming systems are all examples of AI applications. The AI effect occurs when actions deemed to require "intelligence" are eliminated from the definition of AI as machines grow more capable. The application of AI in the legal system is still in its early stages, but it is gradually being accepted by a number of countries, law firms, and judiciaries.

74 (2005)ILLJ471Bom

75 (2006)ILLJ1119Bom

It offers cost-effective solutions to lawyers by pointing out legal flaws in decisions, assisting in the writing of contractual documents, due diligence, legal analytics, and so on. Similarly, AI can work as a catalyst in reducing the burden on the judiciary, particularly in cases involving minor offences, while leaving complicated matters to be resolved by human judges.

Development across the World: History

Artificial intelligence was established as an academic study in 1956 and has since endured multiple waves of optimism, disappointment, and funding loss, followed by new approaches, success, and renewed financing.

Throughout its history, AI research has explored and rejected numerous approaches, including mimicking the brain, modelling human problem solving, formal logic, massive libraries of information, and imitating animal behaviour. During the first two decades of the twenty-first century, highly mathematical statistical machine learning dominated the subject, and this technique was extremely effective, assisting in the resolution of many difficult problems in industry and academia. Human intelligence "can be so clearly described that a machine can be constructed to imitate it," according to the field's founders.

This raises philosophical questions regarding the mind and the ethics of developing intelligent artificial beings. Myth, fiction, and philosophy have all addressed these concerns since antiquity. AI, with its vast potential and power, has also been suggested in science fiction and futurology to pose an existential threat to humanity.

IBM's AI Ross has been adopted by numerous law firms globally, mainly in the United States, and is largely used to evaluate legal contracts, do legal research, and concisely summarise case laws, among other things.

O. Yastrebov, Atabekov 781 Given the findings of the study, the authors would advise Russian legislators to consider the following:

The prospect of establishing a self-regulation institute in the field of robotics, capable of developing standards and codes of conduct that must be followed by owners and owners of robot agents, as well as by the robot agents themselves. - The establishment of an institution as the authorised body at the national (federal) level in the field of robotics, capable of determining the forms of activity appropriate for robots, while keeping in mind that the robot is a source of enormous danger.

Current Position in India

Although there are no particular data privacy rules in India, personal information is protected under Sections 43A and 72A of the Information Technology Act. It, like GDPR, provides a right to compensation for unauthorised disclosure of personal information. The Right to Privacy was proclaimed a Fundamental Right under the Indian Constitution by the Supreme Court in 2017.

AI has the potential to add 957 billion US dollars, or almost 15% of India's present gross value, by 2035. In the coming years, AI will be able to touch everyone's life in some way. In 2018, the NITI Aayog (Policy Commission) launched a number of AI-related activities. The Ministry of Electronics and Information Technology established four committees to emphasise and analyse various ethical problems with AI. A Joint Parliamentary Committee is currently deliberating on the PDP Bill - Personal Data Protection Bill 2019 - which is based on a draught data protection statute. The bill will become law after it has been enacted by both chambers of Parliament. In India, the adoption of AI is outpacing the creation of regulations. Industries are now starting to use AI technology to upskill their workforce.

The recently implemented New Education Policy emphasises teaching coding to kids' rights beginning in Class VI. In the coming years, India will be a centre for emerging AI technologies. Cyril Amarchand Mangaldas is maybe India's first law practise to apply artificial intelligence (AI), which is largely used to analyse and improve contractual and other legal texts. Current CJI SA Bobde has also spoken about and supported for expanded use of AI in the legal system, particularly in docket administration and decision making.

The Supreme Court Bar Association hosted an event (SCBA). However, in developing countries such as India, the deployment of AI may be irregular due to a reluctance to adjust to this new development. There is also concern that AI would have substantial repercussions in a labour surplus economy like India, where the bulk of people are uneducated and impoverished.

AI and Cyber Security

AI and machine learning are quickly becoming indispensable in information security, since these technologies are capable of rapidly analysing millions of data sets and detecting a wide range of cyber risks, from malware threats to shady behaviour that may result in a phishing assault. AI is the ultimate cybersecurity solution for today's organisations that want to succeed

online. To operate successfully and protect their organisations from cyberattacks, security professionals require strong help from intelligent machines and new technology such as AI. The Information Technology Act, 2000 (IT Act), conceived as legislation to regulate the paradigm change in the IT ecosystem, governs practically every aspect of internet activities. Nonetheless, the recent rapid evolution of the digital realm has rendered even this regulation unsuitable and incorrect on various counts. We discovered reports in January 2021 highlighting the Government's plans to alter the IT Act. According to a response to a Lok Sabha question on February 3rd, "MeitY has commenced work on modification to the Information Technology Act, 2000, which involves strengthening the requirements for intermediaries in order to make them more responsive and accountable to Indian users." In addition, in response to our RTI request, the Ministry of Electronics and Information Technology (MEITY) informed us that conversations with important parties about revising the Act had commenced. On this basis, we wrote to MEITY on February 16th, emphasising the need for significant updating of the Act's overarching framework in light of several policy and legal developments that have occurred since its enactment, and recommending that extensive public consultations be held to usher in the necessary changes.

CHAPTER 5

ARTIFICIAL INTELLIGENCE AND CRIMINAL LAW ISSUES

Due to the backlog of cases, a lack of judges and staff, extended hearing dates, and lengthy court procedures, India's judicial system has not been reformed. All of these difficulties contribute to the delay of justice, which is the same as the denial of justice. Artificial Intelligence (AI) must be integrated into the justice administration system to restore the effectiveness of the judicial and law enforcement institutions. "We have the capability of using Artificial Intelligence for the court system," said former Hon'ble Chief Justice of India S.A. Bobde. Only to ensure that unnecessary delays in justice are avoided" emphasises the necessity for AI to provide swift justice. When combined with the concept of e-courts, artificial intelligence (AI) is likely to achieve the goal of integrating Information and Communication Technologies (ICT) in courts. The article discusses the real-world uses of AI in the legal sector, as well as the numerous steps made by state governments to reform the traditional judicial system. Furthermore, it informs readers about the beneficial and negative elements of AI in the context of the court system, which is followed by several judgements, demonstrating the positive need to include AI into the legal system.

5.1 ARTIFICIAL INTELLIGENCE AND HUMAN RIGHTS

As people rely more on robots to improve efficiency and inform their judgments, the possibility of a clash between artificial intelligence and human rights has developed. If left unchecked, artificial intelligence has the potential to cause inequity and perhaps intentionally deny human rights around the world. However, if employed correctly, AI can enhance human rights, promote shared wealth, and build a better future for us all.

It is ultimately up to corporations to carefully assess the opportunities presented by emerging technology and how to best capitalise on these opportunities while keeping human rights in mind.

Here are some of the potential repercussions of implementing artificial intelligence, as well as some issues to consider.

Job substitution

Humans are frequently replaced by AI. Technology improves processes by allowing machines to take over manual and low-level jobs that humans used to control, such as assembly line work. It is anticipated that machines would take over 47 percent of jobs at high risk of automation by 2030. However, new technology is even replacing higher-order duties like driving or filling medication orders.

The usage of AI may eventually result in huge job losses and increased income disparities. However, automation does not have to have a net negative impact; it can often have a positive impact on the workforce by spurring economic growth and lowering prices. The workforce can then be transitioned to new positions that need higher-level thinking and soft skills such as interpersonal skills and emotional intelligence by business executives.

Inadequate Privacy

AI collects huge volumes of data, including streams of data from mobile devices and other gadgets, and extrapolates from it, allowing experts to make data-driven decisions based on unique insights. When firms have such vast amounts of data on their existing customers, potential consumers, and competitors, the collective right to privacy may be jeopardised, especially as AI improves and new ways to use personal information are discovered.

Companies that want to prevent jeopardising their customers' privacy should include additional precautions, such as data anonymization techniques or actively reviewing algorithms for privacy risks.

Discrimination Against Customers and Job Seekers

When algorithms are used to make employment and firing decisions, they may produce discriminatory results. Hiring practises that are based on a homogeneous group may violate federal or state discrimination laws. For instance, if a corporation gets information from public records, it should avoid making assumptions about possible candidates' personalities or skills based only on this information. A human evaluation combined with AI data can more correctly evaluate whether a candidate fits the company's goal.

Complete reliance on AI can be harmful for organisations. Some AI applications, for example, that utilise face recognition to detect theft may prejudice against buyers of specific races or ethnicities. Although the GDPR compels AI users to explain how the algorithm works and how it affects the final choice, the CCPA does not now require this additional layer of consumer

protection. Companies may want to have a human verify any results before taking action to protect themselves from potential charges of prejudice induced by absolute reliance on AI.

AI technology, AI as a tool for discrimination

With the rise of artificial intelligence in our organic civilizations, the issue of discrimination and institutional racism has taken centre stage in political debates about technological progress. Both Article 2 of the Universal Declaration of Human Rights and Article 2 of the International Covenant on Civil and Political Rights express an individual's entitlement to all rights and freedoms without discrimination. Of fact, given the wide spectrum of discriminatory attitudes and oppressive deeds that characterise human contact, this is difficult to put into practise. Though some incorrectly regard AI as the solution to this dilemma, as a technological tool that frees us from the bias of human decision-making, such perspectives ignore the remnants of human intelligence in AI technology.

Indeed, AI algorithms and face-recognition systems have frequently failed to maintain a baseline degree of equality, displaying biased tendencies toward Black people. In 2015, Google Photos, which is considered advanced recognition software, categorised a photograph of two Black people as a shot of gorillas. When keywords like 'Black girls' were typed into the Google search bar, the system returned sexually graphic results. Researchers also revealed that an algorithm used to decide which patients require additional medical treatment undervalued the medical needs of Black patients.

Facial-recognition technology is currently being employed in the criminal justice systems of several governments, including Hong Kong, China, Denmark, and India, to identify suspects for predictive policing. Skeptics contend that instead of moderating and monitoring police activity, such algorithms reinforce pre-existing discriminatory law enforcement practises. Due to the unevaluated bias of these instruments, Black people are more likely to be viewed as high-risk criminals, entrenching racist tendencies in the judicial and prison systems. Such underlying racial discrimination in AI diminishes its revolutionary impact on society and violates equal treatment and the right to protection.

While communities are increasingly campaigning for Black people's rights through the Black Lives Matter movement, the expanding usage of AI in society promotes digital bias and perpetuates the harm that is currently being addressed. As a result, this technology has a disproportionate impact on the weak by exacerbating already pervasive discriminatory practises in modern society.

Job loss caused by technology

Article 23 of the UDHR, Article 6 of the ICESCR, and Article 1(2) of the ILO all provide the right to work and protection from unemployment. Though the rapid rise of AI has altered existing businesses and personal lives by increasing the efficiency of machines and services, it has also ushered in a new era of unemployment owing to the replacement of human labour. In his book *Work in the Future*, Robert Skidelsky says of the exponential rise of technology, "Sooner or later, we will run out of work." This was also emphasised in a seminal research undertaken by Oxford Academics Carl Frey and Michael Osborne, which predicted that 47 percent of employment in the United States are at risk of future automation owing to AI.

Furthermore, the introduction of 'humanitarian drones,' in which military technology is employed for humanitarian objectives, has prompted ethical concerns about how this technology may negatively affect populations in need. There are clearly negative effects for vulnerable groups whose personal data has increased their vulnerability to violence. Biometrics has been utilised by the UNHCR to register refugee populations; while this is supposed to be an objective identifying approach, there is considerable evidence that these technologies essentially codify discrimination. Biometric data obtained from Rohingya refugees in India and Bangladesh, for example, was used to facilitate their repatriation rather than to integrate them into society, increasing the community's misery.

Invading the rights to privacy and equality

Article 12 of the Universal Declaration of Human Rights, Article 17 of the International Covenant on Civil and Political Rights, and various other international and regional human rights documents recognise the right to privacy as a fundamental human right. Article 21 of the Indian Constitution^[iv] guarantees the right to life, which includes the right to privacy. Privacy is a basic human right that is required for living in dignity and safety.

However, in the digital environment, such as when we use applications and social media platforms, large amounts of our personal information are collected - with or without our permission - and can be used to profile us and forecast our behaviour. We share information about our health, political opinions, and family lives without knowing who would use it or for what purpose.

Article 14 of the Indian Constitution guarantees equality before the law. The lack of equality and diversity in AI system design is thus a serious concern: instead of making our decisions more unbiased, they may perpetuate discriminatory practises by giving them the appearance of

objectivity. There is mounting evidence that biased techniques disproportionately affect women, ethnic minorities, disabled persons, and LGBTQ people.

Consequences of AI's harmful effects on human rights:

With COVID 19 already causing employment losses for many individuals, subsequent AI breakthroughs will simply exacerbate the situation. Without control or responsibility, these businesses intrude on residents' lives and violate human rights. AI has shown to be a threat to equal protection, economic rights, and fundamental liberties, from promoting prejudice to participating in intrusive surveillance.

To reverse these trends, appropriate legal standards must be enacted in our digitally transformed communities. Increased transparency in AI decision-making systems, greater responsibility for tech titans, and the opportunity for civil society to protest the entrance of new technologies are all urgently needed. 'AI literacy' could also be encouraged by investing in public awareness and education projects that teach societies not only how AI works, but also how it affects our daily lives.

As an example, consider the Pegasus⁷⁶ leak:

Without the victims' awareness, Pegasus can be installed on their phones. They are vulnerable to tracking, eavesdropping, espionage, and data theft. [xii] After the phone numbers of Indian politicians, journalists, and other notable persons were discovered on a leaked list of prospective hacking targets, the Pegasus programme re-entered the public spotlight. The destructive impact that Pegasus malware has or may have on fundamental rights and freedoms, such as the right to dignity, free assembly, religious freedom, and even a person's physical and psychological authenticity, is critical. Due Diligence is essential during this time:

AI is increasingly being used in law enforcement, public safety, the court system, and border management institutions. The effective protection of the right to privacy and other associated rights is dependent on the legal, administrative, and institutional frameworks established by nations; this is an urgent necessity. The government must:

- Recognize the importance of protecting and strengthening all human rights as a major goal in the advancement, usage, and control of artificial intelligence.

⁷⁶ Pegasus had previously come to light in a leak of records from Hacking Team, which indicated the software had been supplied to the government of Panama in 2015.

- Prohibit the use of artificial intelligence applications that cannot be operated in conformity with international human rights legislation, unless and until adequate safeguards are put in place to protect human rights.
- Ensure that victims of human rights breaches and abuses caused by the use of AI systems have access to effective treatments.
- Ensure that public-private collaborations in the development and application of artificial intelligence technology are transparent, subject to independent human rights oversight, and do not result in the abdication of government duty for human rights.

5.2 ARTIFICIAL INTELLIGENCE AND CRIMINAL JUSTICE

From Homer's Iliad to twentieth-century science fiction films, to Da Vinci's humanoid robot⁷⁷, artificial intelligence (AI) has long been a source of fascination for humans.

Due to the backlog of cases, a lack of judges and staff, extended hearing dates, and lengthy court procedures, India's judicial system has not been reformatted. All of these difficulties contribute to the delay of justice, which is the same as the denial of justice. Artificial Intelligence (AI) must be integrated into the justice administration system to restore the effectiveness of the judicial and law enforcement institutions. "We have the capability of using Artificial Intelligence for the court system," said former Hon'ble Chief Justice of India S.A. Bobde. Only to ensure that unnecessary delays in justice are avoided" emphasises the necessity for AI to provide swift justice. When combined with the concept of e-courts, artificial intelligence (AI) is likely to achieve the goal of integrating Information and Communication Technologies (ICT) in courts.

Artificial Intelligence (AI) in the Legal Industry

The primary areas where artificial intelligence is being utilised or will be employed in the near future are discussed below.

AI applications in law enforcement

AI can assist law enforcement agencies enhance their efficiency in a variety of ways. This involves the use of biometric information such as a suspect's face, speech, blood group, and fingerprints to aid in the investigation and monitoring of offenders. AI-based technologies can successfully help investigators through inquiry methods. It decreases the likelihood of officials making procedural blunders. Additionally, an AI-enabled digital database comprising details

⁷⁷ N J Nilsson, *The Quest for Artificial Intelligence: A History of Ideas and Achievements* (Cambridge: Cambridge University Press, 2009) pp 19–21.

about offences, modes of operation, and similar offences committed in other locations can be constructed. AI has already established a firm foothold in this field, as seen by instances such as the AI-based facial recognition system named:

- ABHED (AI based Human Efface Detection) developed by Staqu technologies with the help of Punjab and Rajasthan Police;
- AI powered equipment introduced by Odisha Police to analyse crime data;
- TRINETRA, an AI based face recognition app launched by Uttar Pradesh Police;
- E-Pragati database launched by Andhra Pradesh Government; and
- AI centre set up by Delhi Police to handle crimes, in association with IIT Delhi.

An AI-powered system can also be utilised to identify minute biological elements present at a crime scene via forensic analysis. Blood, urine, saliva, hair, sperm, fingerprints, and other samples are among those used. AI with cognitive data analytics, identification, and similarity pattern extraction features make it possible. AI programming, in conjunction with big data, can aid in the discovery of crime hotspots by interacting with spatial and temporal information. Similarly, an outbreak of larceny in one location may help forecast similar activity in nearby areas. With the assistance of an AI-enabled database, the evidence obtained at the crime scene can provide a clue regarding the earlier usage of the same weapon. In gunshot analysis, AI systems can aid in the discovery of pattern signatures. It is used to identify bullet waves in order to determine available guns and predict the likelihood of legal authorities being involved in the inquiry.

AI can also assist jail authorities in keeping an eye out for illicit activity on or near the jail grounds. Illegal actions may be quickly and efficiently tracked inside jail premises using AI-based surveillance systems and drone technology. For example, the UP Government, in collaboration with Staqu Technologies, has launched JARVIS, an AI-based video analytics tool, to scan information from CCTV footage throughout prisons.

Use of AI by the judicial system

The doctrine of stare decisis is significant in making court judgements in India. It necessitates using higher court decisions as a point of reference when making choices. An AI-based database with a copy of choices would make this time-consuming task much easier. AI-based technology can be used to record statements given in court without the need for human intervention. It promotes transparency in the conduct of trials. Manual process execution

involving the issuance of summons/notices, the presence of witnesses, the next date of hearing, and so on. This causes an unnecessary delay in timing. To reduce latencies and make the testing process easier, an AI-based solution can be employed. AI can be used to summarise or refine the contents of legal papers, allowing courts to issue interim orders swiftly.

When dealing with criminal proceedings, a judge must make choices such as granting bail to the accused, among other things. These choices are simplified with the assistance of AI-powered machines, which can aid judges in determining the outcome of cases.

- The Arnold Foundation's Public Safety Assessment (PSA), is one of the AI-based tools used in US courts.
- The Apex Court has launched SUVAS (Supreme Court Vidhik Anuvaad Software), an AI-based translation software, to translate English judicial papers into nine vernacular languages.

It will assist laypeople in comprehending the court's legal materials and proceedings. The Supreme Court, in collaboration with the National Informatics Centre, has also established an official multilingual mobile app to enable litigants, attorneys, and citizens with real-time access to the status of court cases, circulars, reports, and other law-related information. The app is available in English, Hindi, and six more regional languages for iOS. Another example is the Supreme Court's SUPACE (Supreme Court Site for Assistance in Courts Efficiency) portal, which aids in the analysis of vast amounts of data relevant to case filings, making it easier for judges to distinguish the important facts and issues in a new case.

The Advantages of Predictive Analytics and How They Are Used in India

There are various potential benefits of using Predictive Analytics and Artificial Intelligence (AI) in criminal justice in India. These technologies have the potential to increase the efficiency of criminal investigations, improve public safety through better risk assessment, and eliminate bias in decision-making.

Improved Crime Investigation Efficiency: One of the most significant advantages of Predictive Analytics and AI in criminal justice in India is its capacity to improve crime investigation efficiency. The Mumbai Police, for example, has been utilising Predictive Analytics and AI to estimate the risk of crime in a specific region and organise their resources accordingly. The system analyses historical crime data to detect patterns and anticipate future crimes, allowing authorities to take preventive measures to prevent crime from occurring.

Better Risk Assessment Can Improve Public Safety: Predictive Analytics and AI can also improve public safety by enhancing risk assessment. The National Crime Records Bureau (NCRB) in India has created the Crime and Criminal Tracking Network and Systems (CCTNS), which collects and analyses crime data from around the country. This information is used by the system to identify and monitor high-risk individuals, such as repeat offenders and known criminals.

Bias in Criminal Justice Decision Making Can Be Reduced: Predictive Analytics and AI can also reduce bias in decision-making by reducing human subjectivity. In India, the Odisha police have developed an AI-based system called the Crime and Criminal Tracking Network and Systems (CCTNS) and another called the "Crime Criminal Analytics and Prediction System" (CAPS), which uses machine learning algorithms to predict the likelihood of an accused person fleeing the state. This system has made the procedure more objective by reducing the reliance on subjective judgements made by police officers and judges.

Predicting the possibility of a suspect re-offending is another example of how Predictive Analytics and AI may eliminate bias in decision-making. The Telangana police department in India has adopted an AI-based system dubbed the "Integrated Criminal Justice System" (ICJS), which analyses data from numerous sources to create a profile of a suspect, including their criminal history and social media activity. The algorithm can then forecast the risk of a suspect reoffending, allowing police to make more educated decisions about their bail or parole release. Although the application of Predictive Analytics and AI in criminal justice has various advantages in India. These technologies have increased the efficiency of criminal investigations, increased public safety through better risk assessment, and reduced decision-making bias. They have the potential to alter India's criminal justice system and lead to a more just and efficient system with future development and integration.

Predictive Analytics and AI in Criminal Justice: Ethical Implications

The use of Predictive Analytics and Artificial Intelligence (AI) in criminal justice has created various ethical problems in India, including worries about bias and discrimination, privacy, and decision-making openness and accountability.

Problems about Bias and Discrimination: The possibility for bias and discrimination is one of the key ethical concerns related with the use of predictive analytics and AI in criminal justice. There are fears that these technologies may be trained on skewed data, resulting in prejudiced

outputs. For example, if a tool is trained on historical data that incorporates prejudices against specific populations, it may produce biased predictions, further marginalising those people.

Problems about privacy: The application of predictive analytics and AI in criminal justice poses privacy concerns. These tools frequently demand access to vast amounts of data, such as social media activity and financial records, which may jeopardise people's privacy. There is also the potential of misusing data or using it for purposes other than those intended, such as commercially profiling individuals or unlawfully surveilling them.

Accountability and Transparency in Criminal Justice Decision-Making:

Another ethical issue raised by the use of predictive analytics and AI is the lack of openness and accountability in decision-making. These tools frequently rely on proprietary algorithms that are opaque to the general public, and there is little information available about how these tools arrive at their results. As a result, it is impossible for anyone to question these tools' conclusions or hold law enforcement organisations accountable for their use.

Several occurrences in India have raised concerns about the use of predictive analytics and AI in criminal justice. For example, during the anti-CAA rallies, the Delhi Police used facial recognition technology to identify protestors, which was criticised for invading privacy and contributing to erroneous arrests. Similarly, the Mumbai Police Department's use of predictive policing tools has been condemned for being biased against particular communities.

To address these ethical problems, law enforcement organisations must ensure that predictive analytics and AI are used in a transparent, accountable, and ethical manner. This could include developing ethical rules for using these tools, hiring third-party auditors to oversee their use, and involving stakeholders in decision-making. Furthermore, law enforcement organisations must realise the limitations of these tools and ensure that they are utilised in conjunction with, rather than in substitute of, human discretion.

Legal Issues Regarding the Use of Predictive Analytics and Algorithms in Criminal Justice

Predictive analytics and artificial intelligence (AI) have grown increasingly widespread in India's criminal justice system in recent years. While these technologies can improve speed and accuracy, they also create serious legal and ethical issues.

Ensure due process and fairness in criminal trials is a major challenge for the application of predictive analytics and AI in the criminal justice system. Because these technologies are trained on past data that may represent systemic prejudices, there is a concern that they would perpetuate bias and discrimination.

For example, if an algorithm is trained on data that disproportionately targets certain communities or classes, it may have an unfair impact on such communities or classes in the criminal justice system. As a result, it is critical to guarantee that these technologies are created and deployed in such a way that they do not violate individuals' due process rights or discriminate against any particular group.

Due process is a key element of the Indian Constitution, which states that everyone has the right to a fair trial, which includes the right to a fair and unbiased judge, the right to submit evidence, the right to cross-examine witnesses, and the right to be heard.

Automated decision-making methods may result in pre-trial detention or pre-sentencing decisions based on automated algorithms rather than customised risk or evidence assessments. This could result in unfair or discriminatory decisions, infringing on the right to a fair trial.

There is also fear that the use of predictive analytics and artificial intelligence in criminal cases may result in a lack of openness and accountability in decision-making. It may be difficult for defendants and their attorneys to question the accuracy or validity of the algorithms utilised in these processes, leading to a lack of trust in the criminal justice system. To address these issues, it is critical to guarantee that predictive analytics and AI are used in criminal proceedings in India in a transparent, accountable, and constitutionally sound manner. This includes creating suitable legislative frameworks and supervision mechanisms to govern how new technologies are used in the criminal justice system.

Another issue is the admissibility of evidence acquired using predictive analytics and artificial intelligence. Long have Indian courts recognised that evidence offered in a criminal trial must be credible, relevant, and acceptable. However, it is unclear how these technologies' evidence will be evaluated by judges. Such evidence may be challenged on the basis that it is untrustworthy or does not meet other admissibility criteria.

The admissibility of evidence obtained using predictive analytics and AI is governed by the same evidence rules that apply to all forms of evidence. In India, the admissibility of evidence in judicial proceedings is governed by the Indian Evidence Act of 1872. Evidence must be "relevant, material, and admissible" under the Act.

The relevance of evidence is assessed by whether it tends to prove or deny a fact at issue in the case.

The materiality of the evidence is assessed by whether it is of such a character that it may fairly affect the court's conclusion.

The admissibility of evidence is established by whether it was collected legitimately and is not barred by any statutory provisions.

The Supreme Court of India ruled in **Anvar P.V. v. P.K. Basheer**⁷⁸ that electronic evidence, such as emails and text messages, is admissible in court if certain circumstances are met. The court ruled that the electronic evidence had to be relevant, authentic, and not tampered with. The court also ruled that the individual creating the electronic evidence must be able to offer the infrastructure and skills required to confirm its legitimacy.

Similarly, the Supreme Court ruled in **State of Maharashtra v. Praful Desai**⁷⁹ that scientific evidence, such as fingerprint analysis, is admissible in court if certain circumstances are met. The court ruled that scientific evidence must be trustworthy, relevant, and conducted appropriately by a trained expert. The expert witness must also be able to explain the methodology and foundation for the scientific evidence, according to the court.

These cases provide guidance on the admission of evidence obtained using predictive analytics and AI in India; such evidence's admissibility will be determined by a number of variables.

First and foremost, the evidence must be pertinent to the subject at hand.

Second, the technology utilised to generate the proof must be scientifically reliable and widely regarded in the field.

Furthermore, the evidence must be gathered in a way consistent with the accused's constitutional and legal rights. Evidence gathered by surveillance or other intrusive tactics, for example, could be challenged on the basis that it infringes the right to privacy.

It is also critical to verify that the data used to train predictive analytics systems is representative of the population and does not propagate biases or discrimination. If the data used to train the technology is skewed, it may produce discriminatory results, which might be challenged on fairness and equality grounds.

Finally, the application of predictive analytics and artificial intelligence in the criminal justice system may jeopardise fundamental rights such as the right to privacy and the right to a fair trial. For example, obtaining data for predictive analytics tools by surveillance or other intrusive means may violate individuals' privacy rights. Furthermore, if these technologies are used to make choices that affect a person's liberty, such as pre-trial detention or punishment, their right to a fair trial may be jeopardised.

The application of predictive analytics and artificial intelligence (AI) in India's criminal justice system has prompted concerns about potential infringement of fundamental rights, including the right to privacy and the right to a fair trial. While there are no specific cases in India dealing

⁷⁸ AIR 2014

⁷⁹ AIR 2003

with the use of these technologies at the moment, there are some instances that have addressed related concerns of basic rights and new technology.

The Supreme Court of India ruled in **Justice K.S. Puttaswamy (Retd.) and Others v. Union of India and Others**⁸⁰ that the right to privacy is a basic right under the Indian Constitution. The court determined that privacy is necessary for the protection of personal autonomy and human dignity, and that any intrusion into privacy must be proportional and justified by a legitimate state goal.

The use of predictive analytics and AI in the criminal justice system may breach the individual's right to privacy if it entails the acquisition and processing of personal data without the individual's informed consent. The data used to train these technologies may also perpetuate biases and discrimination, thereby infringing on the right to equality.

Similarly, it may undermine the right to a fair trial if these technologies are used to make pre-trial detention or pre-sentencing judgments based on automated algorithms rather than individualised assessments of risk or evidence. This could result in unfair or discriminatory decisions, infringing on the right to a fair trial. To guarantee that the use of these technologies is transparent, responsible, and consistent with constitutional norms, proper legal frameworks and oversight procedures must be developed.

Predictive Analytics and AI in Criminal Justice: What the Future Holds

Predictive analytics and artificial intelligence (AI) have the potential to transform the criminal justice system in India and other nations, but their future development and implementation create serious ethical and legal concerns.

Here are some current trends in predictive analytics and AI in the criminal justice system, as well as potential future applications:

- **Police Prediction:** Predictive analytics is being utilised in India and other nations to detect "hot zones" of criminal activity and more effectively deploy police resources. This entails using historical crime data to forecast where future crimes are likely to occur.
- **Risk Assessment:** In India and other nations, predictive analytics is being used to determine the likelihood of recidivism among offenders. This entails predicting the chance of re-offending based on an offender's criminal history, socioeconomic background, and other factors.

⁸⁰ AIR 2017

- **Sentencing:** AI is being utilised to aid judges in establishing appropriate penalties for offenders in India and other nations. This entails generating a sentence based on information about an offender's criminal history, the nature of the offence, and other considerations.
- **Pretrial Detention and Bail:** Predictive analytics is being utilised in India and other countries to evaluate whether an offender should be jailed before trial. This entails predicting the possibility of flight or re-offending based on an offender's criminal history, socioeconomic background, and other factors.
- **Biometric Identification:** Predictive analytics and AI have the potential to have a profound impact on the criminal justice system and society.

Proponents say that these technologies can improve the criminal justice system's efficiency and fairness by eliminating bias, enhancing risk assessment, and ensuring that resources are used appropriately. However, detractors contend that these technologies have the potential to perpetuate institutional biases, violate individual privacy rights, and result in arbitrary or discriminatory outcomes.

Furthermore, the future of predictive analytics and AI in India and other nations' criminal justice systems is likely to be defined by continuous ethical and legal arguments concerning the acceptable use of these technologies. To guarantee that the use of these technologies is transparent, responsible, and consistent with constitutional norms, proper legal frameworks and oversight procedures must be developed.

CHAPTER 6

ARTIFICIAL INTELLIGENCE AND CHAT – GPT

Open AI created ChatGPT, a sophisticated artificial intelligence bot. Its creators, Altman, Musk, and other Silicon Valley investors, established an artificial intelligence research non-profit company in 2015, and it will be disclosed to the public on November 30th, 2022. ChatGPT is an abbreviation for Chat Generative Pre-Trained Transformer. It is a sophisticated AI bot capable of interpreting human speech and producing detailed writing that humans can understand. ChatGPT question-and-answer format makes it fascinating. Chat GPT full form is Generative Pre-Trained Transformer.

6.1 CHAT-GPT DEFINITION

Open AI created ChatGPT, an artificial intelligence chatbot based on the company's (GPT) series of Large Language Models (LLMs)⁸¹. ChatGPT is based on Open Ai's fundamental GPT models.

ChatGPT was released on November 30, 2022, and quickly garnered popularity for its thorough and articulate responses across a wide range of academic fields⁸². However, one significant disadvantage has been its inclination to confidently deliver erroneous information⁸³.

By January 2023⁸⁴, it had become the fastest-growing consumer software application in history, with over 100 million users and a valuation of US\$ 29 billion⁸⁵. Within months, competing LLM products such as Google PaLM-E, Baidu ERNIE, and Meta LLaMA were launched⁸⁶.

The chatbot works on a freemium model. The GPT-3.5 model is available to free users, while paid customers to ChatGPT Plus get restricted access to the more advanced GPT-4 model, as well as priority access to future features.

81 "[The A to Z of Artificial Intelligence](#)". Time. April 13, 2023. Retrieved May 21, 2023.

82 Lock, Samantha (December 5, 2022). "[What is AI chatbot phenomenon ChatGPT and could it replace humans?](#)". *The Guardian*. Archived from the original on January 16, 2023. Retrieved December 5, 2022.

83 Vincent, James (December 5, 2022). "[AI-generated answers temporarily banned on coding Q&A site Stack Overflow](#)". *The Verge*. Archived from the original on January 17, 2023. Retrieved December 5, 2022.

84 Varanasi, Lakshmi (January 5, 2023). "[ChatGPT creator OpenAI is in talks to sell shares in a tender offer that would double the startup's valuation to \\$29 billion](#)". *Insider*. Archived from the original on January 18, 2023. Retrieved January 18, 2023.

85 Hu, Krystal; Hu, Krystal (February 2, 2023). "[ChatGPT sets record for fastest-growing user base – analyst note](#)". Reuters. Archived from the original on February 3, 2023. Retrieved June 3, 2023.

86 "[What's the next word in large language models?](#)". *Nature Machine Intelligence*. 5 (4): 331–332. April 2023. doi:10.1038/s42256-023-00655-z. ISSN 2522-5839. Archived from the original on June 11, 2023. Retrieved June 10, 2023.

What can Chat GPT do?

Chat GPT can answer millions of questions and produce articles on any area, including science, literature, and law. It can write a book and a song, and it can readily formulate chemical equations. It is a substantial intelligence search engine that can generate any data in seconds. It was recently improved to chat GPT 4, which can employ photo searching to find the correct answer.

6.2 THE RISE OF CHAT-GPT AND AI CHATBOTS

The advent of Chat-GPT and AI chatbots has marked a significant advancement in artificial intelligence and natural language processing. Chat-GPT is a sophisticated language model that can interpret and generate human-like text responses. It is built on the GPT (Generative Pre-trained Transformer) architecture.

AI chatbots powered by models such as Chat-GPT are becoming more common in a variety of sectors and applications. They have altered the procedures of customer service, personal help, and information retrieval. Here are a few highlights of their meteoric rise:

1. **Better Natural Language Understanding:** Chat-GPT and AI chatbots have made considerable advances in understanding and producing human language. These models can comprehend complicated questions, assess context, and create meaningful and logical responses after being pre-trained on massive volumes of text data.
2. **Improved User Experience:** AI chatbots provide users with a more streamlined and effective way to communicate with businesses, organisations, and online platforms. They may deliver rapid responses, 24 hours a day, seven days a week, and individualised interactions, increasing client satisfaction and engagement.
3. **Automation and efficiency:** Chatbots aid in the automation of repetitive operations and the streamlining of workflows. They can answer routine enquiries, offer information, and help with basic problem-solving, allowing human resources to focus on more difficult and value-added jobs.

4. **Multilingual and Cross-Cultural Support:** Chat-GPT models were trained on a variety of multilingual datasets, allowing chatbots to converse in many languages and cater to worldwide audiences. This creates new potential for businesses to reach and serve customers in other places.

5. **Industry Applications:** Artificial intelligence chatbots are widely used in a variety of industries. They are used in customer service, e-commerce, finance, healthcare, education, and other fields. Users can utilise chatbots to help them with product recommendations, order monitoring, appointment scheduling, symptom assessment, language learning, and other duties.

6. **Ongoing Improvements:** Researchers and developers are constantly working to improve chatbot capabilities. Improving context awareness, emotion recognition, and tailored responses are all areas of active research. The incorporation of additional AI technologies, such as computer vision and speech recognition, enhances the possibilities of chatbots even further.

It is crucial to emphasise, however, that AI chatbots still have limits. In certain instances, they may have difficulty with unclear requests, recognising subtle context, or providing proper solutions. Ongoing research and development efforts are aimed at addressing these issues and improving the capabilities of AI chatbots.

Overall, the proliferation of Chat-GPT and AI chatbots has altered the way businesses and users engage. Because of their ability to interpret and generate human-like text responses, they have become essential tools for automating jobs, improving customer experiences, and increasing productivity across multiple areas.

6.3 CHAT-GPT IN THE PRACTICE OF LAW

The key issues faced by law practitioners. Chat GPT can serve as an assistant and aid in reducing these difficulties.

- **Legal Research & Document Review:** Lawyers frequently devote significant effort to legal research. Do you need to understand what is written in a ten-page legal document? ChatGPT can scan and summarise vast amounts of legal writings, case law, and legislation in a matter of seconds.

- **Drafting Legal Documents:** Creating legal documents, contracts, and letters can be time-consuming. ChatGPT may produce draughts depending on specified parameters, saving time. Though the prompts generated by ChatGPT will be fairly generic, and you may need to redo them entirely, it will give you a good start.
- **Client Communication:** Drafting and responding to client emails can consume a significant portion of a lawyer's day. ChatGPT can prepare initial responses or develop email templates for frequently asked questions.
- **Meeting Preparation:** Preparing for meetings and court appearances necessitates a significant amount of work, including the preparation of notes, arguments, and other materials. ChatGPT can assist with first draughts or bullet-point summaries.
- **Legal Education:** Keeping up with new laws, rules, and regulations is critical, but it takes time. ChatGPT can provide digestible summaries and main elements of new legislation revisions.
- **Legal Opinions:** Writing legal opinions necessitates careful consideration and precision. ChatGPT can assist by generating an initial draught based on the provided information, which the lawyer can subsequently examine and update.

6.4 DRAWBACKS OF CHAT-GPT

The Drawbacks of Using ChatGPT for Legal Operations

Despite all of the benefits of using ChatGPT in legal practise, such as preparing procedural documents and researching case law, it does have some limits.

- **The issue of legal expertise:** ChatGPT is not a platform created exclusively for lawyers. As a result, you will be unable to obtain an exact answer to your legal query as if it had been created by a professional lawyer.
- **Ethical consideration:** The confidentiality and security of data provided to a lawyer during a consultation or assignment is a critical issue in the lawyer-client relationship. From an ethical standpoint, the possibility of ChatGPT disclosing sensitive data collected raises questions regarding the use of artificial intelligence in legal practise. Furthermore, the application of data privacy and security rules to text generated by artificial intelligence remains an unanswered subject.
- **Lack of detail and awareness of context:** When processing text, ChatGPT need assistance in comprehending the context in which the language is utilised as well as the task at hand. As a result, solutions to legal enquiries are frequently imprecise and

erroneous, with unforeseeable repercussions if not adequately supervised by a legal practitioner.

- **The problem of prejudice:** ChatGPT trains on a wide range of data. Subjectivity, unfairness, inequality, discrimination, and myths may be present in such data. It may result in biased replies, which may have ethical ramifications.
- **The issue of control:** It is difficult to grasp the process of making ChatGPT decisions. The main characteristic of this method is its lack of openness. As a result, unrestricted usage of ChatGPT is impossible.

Because of the limitations indicated above, we must acknowledge the need to employ ChatGPT only when there is human oversight based on human experience and legal expertise. Otherwise, no one can guarantee the accuracy, objectivity, or fairness of responses.

6.5 LEGAL IMPLICATIONS

The Legal Implications of Chat GPT

There will be numerous legal difficulties that may arise as a result of using Chat GPT in the future, including:

1. Copyrights

The issue that may arise as a result of employing Chat GPT is whether the text produced by Chat GPT is copyrighted or not. In the event of a copyright dispute, the court of law must evaluate whether the element is copyrighted or not. To make this conclusion, the court must consider various factors, one of which is that the element must be a human-made product.

It is worth noting that the author is defined in UAE Federal Law No (38) of 2021 as the person who developed the work, or the person whose name is listed thereon, or if the work is credited to him as the author thereof upon publishing, unless otherwise proven. It should also consider as author whoever publishes anonymous or pseudonymous work, or in any other way, provided that there is no doubt as to the true identity of the author; otherwise, the publisher or producer of the work, whether a physical or legal person, shall be deemed to be representing the author in the exercise of his rights until the true identity of the author is recognised.

A famous international controversy involving the copyrights of a selfie photo taken by a monkey and then published on the Wikimedia Foundation website occurred in 2011. The monkey took the photo, which was then published by photographer David Slater "the author."

Later, when it was published on the Wikimedia Foundation, it was done so without the "author's" permission.

The Court believed that the photo was taken by an animal that was not a person "the monkey," which meant that the photo was not copyrighted.

As a result, because the element of human creativity does not exist, the works or elements generated by Chat GPT may not receive the legal protection of copyright.

2. Academic credibility

Another legal issue that may arise as a result of using the chat GPT is academic integrity, because it can generate texts or academic essays, whereas most university rules and regulations strictly adhere to academic integrity rules, which are completely based on the transparency and integrity between the student and the university. Academic students must compose text works and essays from scratch, without the use of a computer application or any other type of application to enrich them.

The question of academic integrity may lead to disciplinary action by the institution against students who use the Chat GPT.

Finally, we feel that utilising Chat GPT will raise a slew of other legal difficulties in the future, and as a result, a slew of rules and laws should be enacted to govern the usage and examine its impact on our society.

Cybercrime Issues

Cybercrime is defined as criminal behaviour that involves the use of a computer, networked device, or network to send illicit material, launch malware and ransomware attacks, perpetrate internet fraud, steal financial information, and so on. ChatGPT has become a useful tool for cyber thieves, aiding them in quickly and easily creating malware and ransomware scripts. Today, 4.9 billion people have access to the internet and use it for a variety of purposes.

Internet connectivity is no longer a key issue; rather, internet and cyber supremacy are the two most important characteristics that an individual, company, or country must possess in order to excel in their respective fields. Recently, two CyberArk researchers, Eran Shimony and Omer Tsarfati, published a report in which they highlighted how the bot may be used as a great tool to develop highly evasive malware known as polymorphic malware. The bot's existing guidelines and settings ensure that the tool does not produce dangerous software, but it has the ability to hasten the process for those who are familiar with such coding.

Once a person obtains the desired results, they will be able to generate error-free programmes for nefarious web operations. Several allegations have appeared claiming that active Dark Web

players have been testing ChatGPT for developing codes and programmes like Infostelaer, as well as creating encryption tools. A recent dark web actor shared images of how he created an information stealer programme that finds files of interest, copies them using malware, and distributes them to the web in the form of a zip file that is not encrypted, making it available for third-party use.

At the moment, the ChatGTP developers are focusing their efforts on making the program's defensive side considerably stronger and more robust, so that attackers are prohibited from misusing the bot for a variety of reasons. As previously said, it is difficult to determine which code is being used for what purpose, and it is also difficult to determine if that code is generated by the bot or authored by a human himself, because content available via ChatGTP can be easily copied and utilised at the user's discretion. To address this issue, the AI-creators bot's are considering adding a non-erasable "watermark," which would aid in distinguishing between work generated by the AI-powered bot and original work.

However, developers must exercise extreme caution when deciding on the style of the watermark because, with today's editing tools, any document may be quickly edited; consequently, a watermark design that is visible and difficult to remove or erase must be used.

CHAPTER 7

CONCLUSION AND SUGGESTION

Professor Klaus Schwab, Founder and Executive Chairman of the World Economic Forum, investigates the Fourth Industrial Transformation in his new book, *The Fourth Industrial Revolution*, a revolution that is radically altering the way we live, work, and interact with one another. Previous industrial revolutions emancipated humanity from animal power (Agrarian), enabled mass production (Industrial), and provided billions of people with digital capabilities (Internet)⁸⁵. Artificial intelligence is driving the fourth revolution.

AI is defined as any artificially manufactured intelligence, i.e. a software system that simulates human thinking on a computer or other devices, such as home management systems integrated into household appliances, robots, autonomous cars, unmanned aerial vehicles, and so on. AI can be characterised in terms of logical behaviour and the factor of a thinking human being:

- (i) Systems that think and behave like humans; and
- (ii) Systems that think and behave rationally. These characteristics show that AI is distinct from traditional computer algorithms. These are systems that can train themselves (store their personal experience). This distinct trait enables AI to behave differently in similar situations based on previous actions. This is pretty similar to what humans go through. Cognitive modelling and rational thinking techniques provide greater flexibility and enable the development of computers that can "understand," i.e. have the characteristics of a reasonable person (brain activity processes).

As AI technology, goods, systems, and autonomous robots advance and acquire acceptance, so will the number of legal claims relating to these technologies. While courts, legislators, and regulatory agencies have begun to address the novel legal challenges raised, the current legal framework leaves some areas open for further development. Parties initiating and defending AI-related cases will need to develop novel approaches to resolving concerns like as causation and liability, which will undoubtedly be at the forefront of any AI-related litigation. And, when unique AI-related challenges occur with no obvious legal precedence or regulations to rely on, we should still wait a little longer before enlisting the assistance of a robot.

The ability to gather and learn from experience, as well as the ability to act independently and make individual judgments, sets the conditions for damage. Because national and international law do not recognise AI as a legal person, it cannot be held personally accountable for the harm it produces. As a result, in the context of AI liability issues, the general principle in article 12 of the United Nations Convention on the Use of Electronic Communications in International Contracts, which states that a person (whether a natural person or a legal entity) on whose behalf a computer was programmed should ultimately be responsible for any message generated by the machine, may be applied.

Given the aforementioned, the idea of AI-as-Tool can be used, which means that stringent liability standards govern the machine's behaviour, binding the natural or legal person on whose behalf it acts, regardless of whether such behaviour was planned or anticipated. The actors could be the creators of the AI systems machines, the users of AI, the programmers of the software that runs on such computers, and the owners of such devices.

When an AI system is regarded to be a tool, vicarious or strict culpability for the damage created by AI can be applied. The concept of vicarious culpability derives from the respondent superior liability principle developed in Roman law. That argument holds the defendant accountable for the torts perpetrated by primitive AI; consequently, guilt is put on the person due to his relationship with the tortfeasor AI rather than his own illegal behaviour. When AI exhibits erratic behaviour and causes harm to a third party, the person (the AI owner or user) may seek restitution from the AI designer and (or) producer (product liability). However, according to AI operating principles based on independent decision making, establishing a burden of proof in a suitable manner would be problematic. Regulatory mandates can ensure that AI systems have subsystems that explain decision logic for interrogative purposes.

Strict liability for AI-related actions can be applied for AI classified as ultra-hazardous activities. In a product liability case the plaintiff would find it very difficult to prove that the AI product was defective and especially that the defect existed when AI left its maker or creator. Because AI is a self-learning system, it may be impossible to distinguish between harm caused by AI's will during the process of (self) learning and product defects. AI can be viewed as a bigger risk, and the person acting as a manager on its behalf could be held liable without guilt. Thus, the "deep pocket" hypothesis might be useful, which states that a person who engages in dangerous activities that are profitable and useful to society should compensate for the harm done to society as a result of the wealth acquired. A person with a "big wallet." As an

assurance for their dangerous actions, the producer or programmer is obligated to insure against civil responsibility. In this instance, the Common Enterprise Doctrine, modified to a new strict liability framework, can also be applied.

Sector-specific legislation, standards, and standardisation must be developed through the collective and collaborative efforts of public and commercial players across geographical boundaries. In unregulated areas, possibility is limitless, but the law's laws undoubtedly "bound" it. Any regulatory action should be thoroughly considered in terms of its benefits and potential influence on creative endeavours.

Artificial intelligence (AI) has major implications for the legal business, both in terms of possible benefits and obstacles. While AI has the ability to expedite processes, improve efficiency, and increase access to justice, it also raises significant legal and ethical concerns. One of the most significant advantages of artificial intelligence in the legal industry is its capacity to automate routine and repetitive operations such as document screening, contract analysis, and legal research. AI-powered systems can quickly scan large amounts of legal data, find trends, and extract essential information, saving legal practitioners time and money. This automation can free up lawyers' time to focus on more complicated and strategic work, resulting in higher overall productivity.

AI can also help in legal research by providing extensive and up-to-date information on case law, statutes, and regulations. This can assist lawyers in more efficiently locating important precedents and legal arguments, boosting the quality of their work and potentially leading to better outcomes for clients.

AI technology, such as natural language processing and machine learning, can examine enormous amounts of information in the courtroom and help forecast case outcomes. This predictive skill can assist lawyers in assessing the strengths and weaknesses of their arguments, allowing them to make better decisions concerning case strategies.

However, integrating AI into the judicial system is fraught with difficulties. One important source of concern is the possibility of bias in AI systems. If the data used to train AI models is biased or reflects historical injustices, the AI system may perpetuate and exacerbate these prejudices. It is critical to ensure fairness, transparency, and accountability in AI systems in order to prevent discrimination and promote justice values.

Another issue is lawyers' ethical responsibilities while employing AI. While AI can provide useful insights and recommendations, it should never be used to substitute human judgement

or ethical considerations. Lawyers must practise critical thinking and keep control over AI technologies in order to analyse AI-generated outputs in light of legal and ethical standards.

Furthermore, when AI systems are involved, the legal profession faces problems concerning liability and accountability. Who is liable if an AI-powered tool makes a mistake or gives incorrect advice? Determining legal responsibility and establishing clear accountability frameworks are critical considerations for the legal community.

Artificial intelligence has the potential to revolutionise the legal industry by increasing efficiency, boosting legal research, and assisting decision-making. However, questions about bias, ethical considerations, and responsibility must be addressed with care. As AI evolves in the legal realm, it will be critical to balance the benefits of AI with the need to protect human judgement and uphold legal values.

SUGGESTIONS

There are several significant concerns to keep in mind when it comes to legal liability issues and artificial intelligence (AI) regulation. Here are a few suggestions:

1. Define legal liability: Create clear standards for evaluating legal liability when AI systems are involved. This includes determining who should be held accountable for any AI-related harm, such as AI developers, operators, or end-users.

2. Transparency and explain ability: Enforce rules requiring AI systems to be transparent and explainable. This means that humans should be able to understand and interpret AI algorithms and decision-making processes. This is especially important in industries where AI is used to make essential decisions that affect people's lives, such as healthcare or autonomous vehicles.

3. Data privacy and security: Ensure that AI systems follow current data protection and privacy legislation. AI frequently relies on massive volumes of data, therefore it's critical to protect people's privacy rights, prevent unwanted access, and limit the dangers of data breaches or misuse.

4. Fairness and bias: Address bias in AI systems by encouraging fairness and non-discrimination. Create legislation requiring AI developers to reduce biases in training data and algorithms in order to avoid unfair or discriminatory outcomes, notably in hiring, lending, and law enforcement.

5. Safety and risk mitigation: Implement AI system safety guidelines to reduce potential hazards and harm. This is especially important for AI applications in industries such as healthcare, transportation, and manufacturing, where AI system failure could have serious implications. These hazards can be mitigated by encouraging the use of rigorous testing, validation, and risk assessment frameworks.

6. Intellectual property rights: Address the special issues that AI poses in terms of intellectual property rights. Determine how to assign ownership and copyright when AI systems develop creative or inventive outputs, and explain the legal position of AI-generated works.

7. Cross-border rules: To address the global character of AI development and deployment, encourage international cooperation and harmonisation of AI regulations. Encourage international cooperation to establish common standards and principles, supporting responsible and ethical AI practises around the world.

8. Continuous monitoring and adaptation: Create methods for AI regulation monitoring and adaptation. AI is a rapidly expanding industry, and rules must keep up with technological breakthroughs in order to properly address new concerns.

It's important to note that AI regulation is a complex and continuing process that necessitates input from a wide range of stakeholders, including legislators, industry experts, ethicists, and legal professionals. The proposals above are a starting point for resolving legal liability issues and AI legislation, although precise specifics and execution may differ depending on jurisdiction and situation.

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