

IPR IN ARTIFICIAL INTELLIGENCE: A CHALLENGE FOR INDIA

Dr. Raana Shahwal¹

Assistant Prof.

Department of Commerce

The Bhopal School of Social Sciences, Bhopal

Email: rshahwal2002@gmail.com

Ms. Sandhya Jaiswal²

B. Com Honours III Year

The Bhopal School of Social Sciences

Email: sandhyajaiswalsays@gmail.com

Ms. Vanshika Punj³

B. Com Honours III Year

The Bhopal School of Social Sciences

Email: vanshikapunj27@gmail.com

ABSTRACT

Artificial intelligence and intellectual property share a synergistic connection, where the former helps the other. where Artificial intelligence has come out as an advancing powerful tool to solve complex problems in all areas, intellectual property still has some catching up to do. This research paper delves into the transformative influence of Artificial Intelligence (AI) on the landscape of Intellectual Property Rights (IPR). As advancements are being made in the field of AI technologies, giving rise to a whole new sector of innovation and growth. The development of various AI

technologies and tools being used in various industries has raised novel challenges and opportunities for intellectual property protection. This study aims to provide a comprehensive overview of the intersection between AI and IPR, and the applicability of AI in IP. The objectives of the study would be to understand the concept of IPR and AI along with existing challenges and issues in the field of AI related to IPR in India. The facts Figures and data collected from secondary and published sources like official websites of Intellectual Property India and from E journals magazines, and from other sites. The paper elucidates the role of AI in innovation and creativity, exploring how AI-generated content and inventions challenge traditional notions of authorship and inventorship. It further investigates the adequacy of existing IPR frameworks in addressing the unique attributes of AI-generated outputs and the evolving concept of ownership. A thorough analysis and discussion on existing issues and threats that AI developments are causing in the IPR policy framework. Additionally, the research scrutinizes the use of the recent AI system, CHATGPT. The study also delves into the viewpoints of global influential people related to AI development regulatory framework and laws in the field of IPR.

Keywords: Emerging technologies, Regulatory body, Data privacy, Ethical consideration.

INTRODUCTION

This research article is based upon the challenges and issues faced due to the intellectual property right in AI progression. This article includes the meaning of AI and IPR and the relationship

between them. As we all know, AI is a very hot topic nowadays, so it should be necessary to find out the challenges and issues related to AI and whether AI should be given legal status or not in India. This also includes the suggestive measures that can be taken to minimise the risks associated with providing IP rights to AI. The research article consists of the statements and suggestions given by big entrepreneurs, political leaders, industrialists, etc. on AI's credibility and the specific challenges and considerations related to IPRs in the AI policy framework of India. Intellectual property is the right given to people for their unique ideas and creations. They often give the creator exclusive rights to use their work for a certain period. Intellectual property (IP) refers to property such as inventions; literary and artistic works; designs; Symbols, names and images used in business life. Intellectual property is protected by rights such as patents, copyrights, and trademarks, allowing individuals to receive recognition or financial support from their creations or inventions. By striking a balance between the interests of innovators and the public interest, IP policy succeeds in creating an environment in which creative and imaginative innovation can flourish.

Artificial Intelligence entails the improvement of algorithms and computer applications that may perform responsibilities that generally require human intelligence which include visual perception, speech popularity, decision-making, and language translation. AI has the capability to revolutionize many industries and has a huge variety of programs, from virtual personal assistants to self-driving automobiles. Currently Artificial Intelligence is driving digital transformation across various sectors and has a vast and lasting impact on the society and economy of India. AI has the

potential to transform industries like healthcare, education, agriculture, etc.

OBJECTIVES

- To understand the concept of IPR and AI
- To study the existing challenges and issues in the field of AI related to IPR in India

REVIEW OF LITERATURE

Dwivedi, 2019 in the article titled 'Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy' presented a multidisciplinary perspective on emerging challenges and opportunities in AI. It suggests the relevance of legal considerations in the context of IPR protection in AI. But it does not state the legal policy framework of AI inventions in current scenario.

Chatterjee, 2020 in the article titled 'AI strategy of India: policy framework, adoption challenges and actions for government' stated the development and implementation of AI policy frameworks are essential for countries like India. The study focused on the AI strategy of India, highlighting the policy framework, adoption challenges, and recommended actions for the government. In the research paper the viewpoint of public related to AI inventions and creations.

Sambasivan, 2021 in the article titled 'Re-imagining Algorithmic Fairness in India and Beyond' stated that in the context of AI, algorithmic fairness is a crucial aspect that needs to be

addressed. The study highlighted the importance of re-imagining algorithmic fairness in India and beyond, emphasizing the need for fair and transparent AI systems. Such a policy framework is expected to have far-reaching effects, benefiting Indian industries and society. However, the specific challenges and considerations related to IPRs in the AI policy framework of India want further exploration that will be discussed further in this research article.

RESEARCH METHEDOLOGY

Research Methodology is a track to solve the problems of research in a systematic and consistent manner. Research means exploration of facts and figures again and again till the continuance of knowledge. The proposed study would be descriptive in nature and based on secondary data. The data has been taken from various government portals, official websites, notifications, research papers, content analysis of old records, journals, newspaper articles etc. The objectives of the study would be to understand the concept of IPR and to study the existing challenges and issues in the field of AI related to IPR in India. To achieve and attain the said objectives we can analyse study and research about statements of Problem at national as well international level. Further we can analyse the possible laws and regulations related to the existing challenges and issues of AI in IPR. The proposed study will discuss about pros and cons of AI and at the end we will provide suggestive measures to policy makers and administrations. The study would be beneficial for public and private sector firms, students, and stakeholders. The study would be helpful for Further research.

DISCUSSION AND ANALYSIS

Intellectual property Right

Intellectual property Right is a legal concept that refers to intellectual property such as inventions, writings, drawings, designs, symbols, and names used in the business world. In the digital age, the rise of the internet and new technologies have completely transformed the way creativity is created, distributed, and used. This creates new challenges for intellectual property owners, governments, and consumers.

Types of IPR

Patent: A patent is a right granted to an invention or creativity. A patent gives the patent owner the right to determine how others can or cannot use the invention.

Copyright: A Copyright is a legal term used to describe the rights that creators have over their writings and works of art. Works protected by copyright include many works, from books, music, paintings, sculptures and films, computer programs, databases, and technical drawings etc.

Trademark: A trademark is a sign that can distinguish a company's products or services and differentiate the design of a business from other businesses.

Industrial Design: Industrial design protects the appearance and beauty of a product. A design can have three-dimensional features, such as the shape or surface of an object, or two-dimensional features, such as patterns, lines, or colours.

Geographical products: Geographical products and signs of origin

are products of good quality, reputation or characteristics that are used to indicate the historical region and create significant attributes of that place or region.

Trade secrets: Trade secrets are intellectual property rights in confidential information that can be sold or licensed.

Artificial Intelligence

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines designed to act like humans. For better understanding Artificial Intelligence can be understood by Artificial means Not natural or real. Intelligence refers to the ability to learn and solve problems through knowledge or experiences. Hence it can be said that Artificial Intelligence means the copy of something natural i.e., human beings, who are applying the knowledge based upon their experiences and knowledge. The AI systems are more generic in nature. AI includes tools like search engines and mathematical optimizations, logic and methods based on probability and economics. The AI field draws upon computer science, linguistics, philosophy, mathematics, neuroscience, psychology, and artificial psychology, etc. The primary focus of artificial intelligence is towards considerate human behaviour and overall performance. This can be done by creating computers and software with human-like intelligence and abilities. This consists of natural language processing, facial evaluation, and robotics. Examples of AI include autonomous vehicles like drones and self-driving cars, medical diagnosis, creating art like paintings, sketches, poetry, playing games, solving and proving mathematical theorems, search engines, virtual assistants (such as Siri, google speech), image and iris

recognition in photographs, spam filtering and targeted online advertisements. Other applications include Automotive, Healthcare, Finance, Video games, etc.

Existing Issues caused due to IPR in Artificial Intelligence

Intellectual Property Rights (IPR) in the field of artificial intelligence (AI) present various challenges, reflecting the complex and rapidly evolving nature of AI technology. Some of the key challenges associated with IPR in AI include:

- **Determining legal framework, authorship and inventorship:** Determining ownership, liability, and the scope of protection for AI-generated innovations can be ambiguous, leading to legal uncertainties. AI systems can autonomously generate creative works or invent novel solutions. Determining authorship and inventorship in such cases becomes challenging, as traditional concepts of human authorship and invention may not apply directly to AI-generated content.
- **Lack of Clear Guidelines:** There is a lack of clear guidelines and international standards for the protection of AI-related intellectual property. This can result in inconsistencies and differing interpretations across jurisdictions, making it difficult for companies and individuals to navigate the legal landscape. In such a scenario, India should collaborate with other developed nations in the field of AI and frame uniform legal framework and standards to obtain IP rights; and to maximize its benefits.
- **Data Privacy Concerns:** Many AI systems rely on vast amounts of data for training and development. The use of proprietary datasets can lead to concerns about privacy and data protection,

complicating the establishment and protection of intellectual property rights.

- **Rapid Technological Evolution:** AI technologies are evolving at a rapid pace, and legal frameworks may struggle to keep up. This makes it challenging to create laws and regulations that adequately address the unique aspects of AI, leading to potential gaps and uncertainties in IPR protection.
- **Patent Eligibility:** Determining the patent eligibility of AI-related inventions can be complex. In some jurisdictions, patent offices may struggle to define the boundaries of what constitutes a patentable AI innovation, leading to inconsistencies in granting or rejecting patents.
- **Ethical Considerations:** AI technologies raise ethical questions regarding fairness, accountability, and transparency. Aligning IPR with ethical considerations can be challenging, as protecting certain AI innovations may conflict with broader societal values.
- **Monopoly Concerns:** The concentration of AI-related intellectual property in a few entities may raise concerns about monopolies and hinder fair competition. Striking a balance between protecting innovation and fostering competition is a delicate challenge.
- **Global Nature of AI Development:** AI development is a global endeavour, involving collaboration across borders. Harmonizing intellectual property laws and enforcement mechanisms internationally poses a significant challenge, given the diverse legal systems and cultural differences. Addressing these challenges requires ongoing dialogue between legal, technical, and ethical experts to develop frameworks that balance the need for innovation with ethical considerations and legal protections.

THE INTERSECTION BETWEEN IPR AND AI: CONFLICT OR COMPLEMENTARY

AI is being used freely and frequently by users without knowing its functioning and negative impact which results in decreasing their productivity and affecting their privacy. For instance, if someone wants to make a PPT he/she can make it in no time, or employees who want to do forecasting use AI, causing reduction in their efficiency and willingness to do the work. But what users are not considering is that while using such systems they are sharing their private and personal information with the AI system which will eventually use that data to learn their patterns and behaviours which may result in violating their privacy. And, the users are simply ignoring the fact that AI systems are providing output by using the pre-existing data which could be someone else's creation; which is being used in these systems and using content from such software and systems might result in infringing upon someone else's creations. Political leaders, powerful people, and industrialists know the impact that AI has and will have in the future; hence, they are advising to use AI in a limited manner, and they are suggesting that laws and regulations should be created so that it will not overpower humans in the future.

Opinion of policy makers and leaders about IPR and AI are as follows-

Mr. Narendra Modi, Prime Minister of India, underlining the negative aspects of AI, the Prime Minister said that indeed though it has the implication to become the strongest tool for development in the 21st century, it can also play a vital part in its destruction. Pointing

out the challenges of deep fake, cyber security, data theft and terrorist associations getting their hands on AI tools, Prime Minister Modi stressed the need for countermeasures. He threw light on India's offer to produce a frame for Responsible Human-Centric AI governance and reaffirmed the commitment of all member countries towards 'AI Principles'. He emphasized working together just like the agreements and protocols on transnational issues and creating a frame for the ethical use of AI, including the testing and development of high-threat or frontier AI tools. Stressing the need for conviction, commitment, and collaboration, the Prime Minister asked the entire world not to waste even a moment in this direction.

Businessman and Investor, **Mr. Elon Musk**, made a prediction: Artificial intelligence (AI) will advance to the point where it surpasses human activity. He predicts that artificial intelligence will exceed the intelligence of most people. He stated that we will have something smarter than the smartest human beings for the first time. AI is one of the biggest threats to human beings soon, he added. He also mentioned that "AI could be the reason for the end of humanity." According to him AI possesses to be one of the smartest things other than human beings and hence cause threat in the future.

US Vice President **Kamala Harris** called for intelligence to "serve the people" and warned that it could bring "great benefits" as well as "disaster." "I don't know if we can control something like this, but I think we can aim to move it in a good direction for people." There is a "global consensus" on understanding AI to create a "third-party supervisory body" that can monitor what AI companies are doing and at least sound the alarm if they think so.

King Charles raised concerns in a video message and said that AI also presented "significant risks" that needed to be taken care of. He added: "AI has the potential to transform our lives, helping us to cure and treat major diseases, and empowering us to move towards net-zero emissions and ushering in a new, limitless era of sustainability or simply making our lives easier. He also stated that "If we want to understand the advantages of AI, we must work together in order to eliminate the risks associated with it."

To understand all these statements given by these personalities, let us take an example of the most common AI tool that is used majorly by everyone, Chat GPT. The most recent revolutionary evolution of AI is Chat GPT. One of the biggest challenges in the digital world faced by the intellectual property is copyright violation. It becomes easier for the people to copy and share the digital content without permission which is extensively available on digital platforms. This in turn led to substantial losses for creators and distributors of IP and has made it difficult to impose intellectual property rights.

The other challenge includes piracy. With the rise of peer- to- peer data sharing and online streaming platforms, it has become easier than ever for people to penetrate and share copyrighted content without authorization. This has given rise to significant fiscal losses for copyright holders, particularly in the music and film fields and industry. Another challenge is the issue of fair and genuine use. Fair use is a legal doctrine that allows for limited use of copyrighted material without authorization, similar as for review, news reporting, tutoring, education, or exploration. Still, the digital period has made it more delicate to determine what constitutes fair use, particularly

about online content. Another related challenge is the intellectual property of open-source software. Open-source software is software that makes its source code accessible to the public, allowing users to freely modify and distribute it. This can make it difficult for companies to protect their intellectual property rights because they can be freely copied and distributed. With the example of ChatGPT and the statements given by powerful personalities and influential people we can conclude the discussion and analysis related to IPR in AI.

SUGGESTIVE MEASURES

Some of the suggestive measures to be taken to frame AI regulations to grant Legal rights —

- **Regulatory body:** AI can be given legal rights only if there is a regulatory body that keeps an eye on every piece of work done by AI systems. It should regulate, provide protection, and frame policies related to the input and output generated by AI software, just like SEBI or RBI.
- **Accountability and Responsibility:** Define clear lines of accountability for AI systems. Establish who is responsible for the outcomes of AI applications, whether it's developers, operators, or organizations. Require transparency in AI systems to ensure that the decision-making processes are understandable and explainable. This helps build trust and accountability.
- **Data Privacy and Security:** Develop regulations that safeguard user's data and privacy. Ensure that AI systems comply with existing data protection laws and guidelines. Mandate robust

cybersecurity measures to protect AI systems from malicious attacks. This includes securing data, preventing unauthorized access, and ensuring the integrity of AI algorithms. If the system is not using personal users of data unethically, it can be considered for IP rights.

- **Ethical Guidelines:** Establish clear ethical guidelines for the development and use of AI. Encourage responsible behaviour among developers, organizations, and users. Require human oversight in critical decision-making processes involving AI. This can help prevent unintended consequences and ensure human values are considered.
- **International Collaboration:** Encourage collaboration between countries to create consistent global standards for AI. This can help avoid fragmented regulations and ensure a more unified approach. Also, IP rights should be provided if there is an international legal body that can control and regulate all the standards and laws of different countries.
- **Testing and Certification:** Establish testing and certification standards for AI systems to ensure they meet certain criteria for safety, reliability, and ethical considerations. There should be an inspection medium that can classify AI tools into red, yellow, or green as per their capabilities and accordingly should be given IP rights.
- **Enforcement Mechanisms:** Establish effective enforcement mechanisms to ensure compliance with IP regulations. It should include penalties for non-compliance and non-preparation of regular audits. Therefore, if the AI system follows these above-mentioned basic parameters, it can be registered and given legal rights under IP.

CONCLUSION

The research states that despite having many advantages of IPR in AI, it includes significant challenges that can have a major effect on human beings in the future which needs due diligence. It is concluded through the research that a third-party regulation system should prevail in India and there should also be a regulatory body at the international level governing the same, should be formed in collaboration with the other nations. By giving legal rights to AI, it shall have both positive as well as negative impact on the people and the society, but proper enforcement of law will determine that it will not harm the privacy and should not fetch personal data of its users for commercialization purposes. The systems which are dangerous and complex should not be given rights and should not be available to the public and there should be a prescribed limit of usage of these systems for users other than the public. Humans should oversee the critical decision-making processes for AI development and make decisions after considering all these factors. It can also be determined and should be clear in whose name the patent is to be granted and who the user will be. India as a developing nation should take reasonable steps for AI in the field of IPR so that it will help India to grow in a positive manner.

LIMITATIONS OF THE STUDY

- The study is based on secondary data and Published information
- The reliability of data is totally dependent on the available reports, statements of policy makers.

SCOPE FOR FURTHER RESEARCH

Scope means the area or the reportage of the study where the work done will be useful for further research and developments. The study is very helpful for the upcoming IPR and AI based studies. It gives an idea to administrators and policy makers of the country, about the trends of IPR in AI and its challenges in India. With the help of study, Further researchers may opt the other parameters to know more about the same area. This study is also beneficial for all stakeholders like shareholders, Investors, public and Government.

REFERENCES

1. Chatterjee, S. (2020). AI strategy of India: Policy framework, adoption challenges, and actions for government. *Transforming Government: People, Process and Policy*, 14, 757-775. <https://doi.org/10.1108/tg-05-2019-0031>
2. Dwivedi, Y. K., Hughes, L., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., Eirug, A., Galanos, V., Ilavarasan, P., Janssen, M., Samothrakis, S., Spencer, J., Tamilmani, K., Tubadji, A., Walton, P., & Williams, M. D. (2019). Artificial intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice, and policy. *International Journal of Information Management*. <https://doi.org/10.1016/j.ijinfomgt.2019.08.002>
3. eRegister: Intellectual Property India. (n.d.). Retrieved from <https://ipindiaservices.gov.in/eregister/eregister.aspx>
4. GeeksforGeeks. (n.d.). Artificial intelligence – An introduction. Retrieved from <https://www.geeksforgeeks.org/artificial-intelligence-an-introduction/>
5. ICEGATE: IPR. (n.d.). Retrieved from <https://ipr.icegate.gov.in/>
6. India AI: AI Standards. (n.d.). AI and intellectual property rights. Retrieved from <https://indiaai.gov.in/ai-standards/ai-and-intellectual-property-rights>
7. Intellectual Property India (n.d.). Retrieved from <https://www.india.gov.in/website-intellectual-property-india?page=3>
8. Intellectual Property India. (n.d.). Retrieved from <https://www.ipindia.gov.in/>

9. Jajpura, L. (2015). Microfinance and micro entrepreneurship: A paradigm shift for societal development (Dr. Surender Mor, Ed.). Vista International Publication House, Delhi. (pp. 263-271).
10. Jobs and Career: IPR. (n.d.). Retrieved from https://www.ipr.res.in/documents/jobs_career.html
11. Narayanan, S. (2010). Intellectual property rights economy vs. science and technology. *International Journal of Intellectual Property Rights*, 1(1), 6-10.
12. Samaddar, S. G., & Chaudhary, B. D. (2008). Practical insights into intellectual property strategy for technical institute. *Journal of Intellectual Property Rights*, 13, 590-600.
13. Sambasivan, N., Arnesen, E., Hutchinson, B., Doshi, T., & Prabhakaran, V. (2021). Re-imagining algorithmic fairness in India and beyond. In *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*. <https://doi.org/10.1145/3442188.3445896>
14. Sharma, D. K. (2014). Intellectual property and the need to protect it. *Indian Journal of Science and Research*, 9, 84-87.
15. Sinha, B., Joshi, H., & Ghosh, P. K. (2009). Challenges in creation and management of knowledge capital in technical educational institutions. *Journal of Intellectual Property Rights*, 14, 340-345.
16. The National News. (2023, November 1). Elon Musk: AI poses major threat to humanity. Retrieved from <https://www.thenationalnews.com/business/technology/2023/11/01/elon-musk-ai-poses-major-threat-to-humanity/>
17. Tzu Chi Medical Journal. (n.d.). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7605294/>
18. World Intellectual Property Organization (WIPO). (n.d.). About IP. Retrieved from <https://www.wipo.int/about-ip/en/>
19. World Intellectual Property Organization (WIPO). (n.d.). Artificial intelligence and intellectual property policy. Retrieved from https://www.wipo.int/about-ip/en/artificial_intelligence/policy.html