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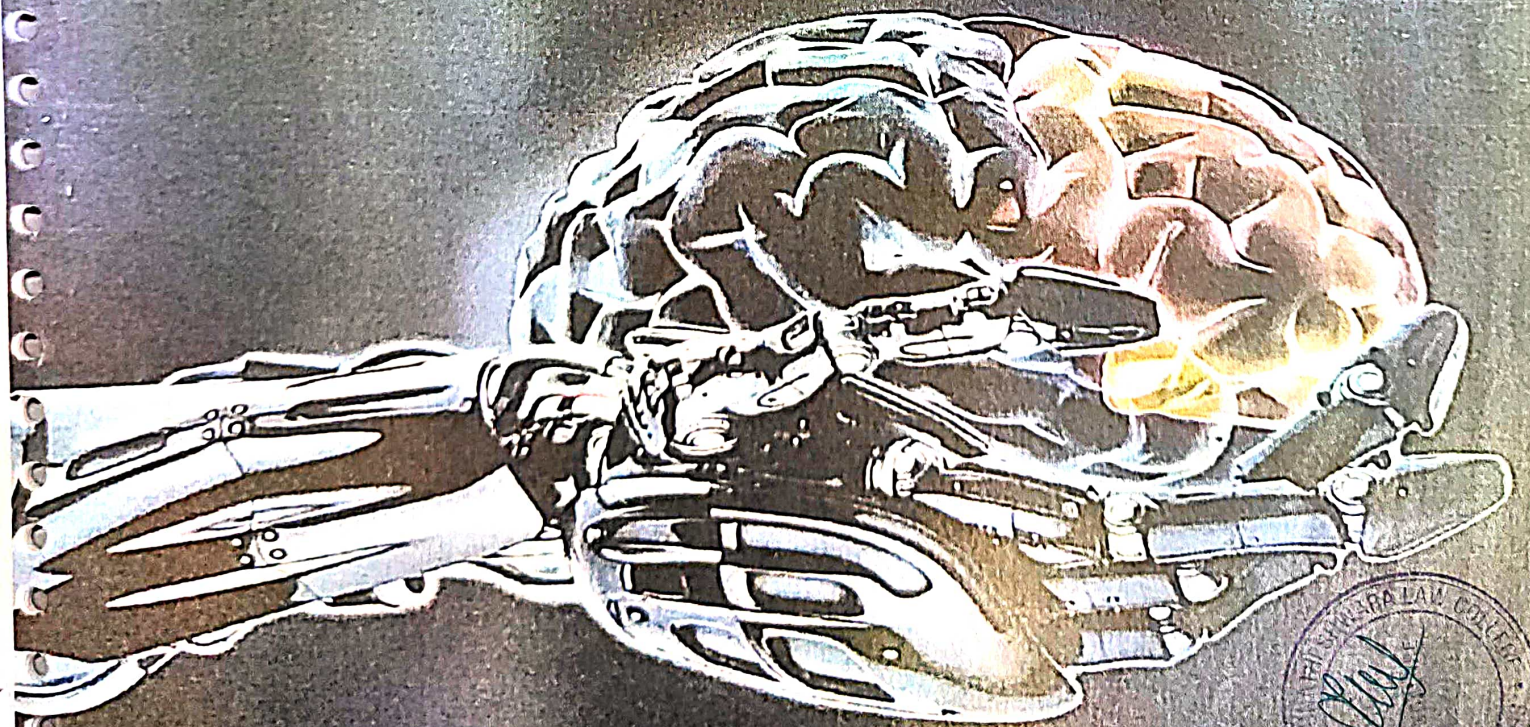
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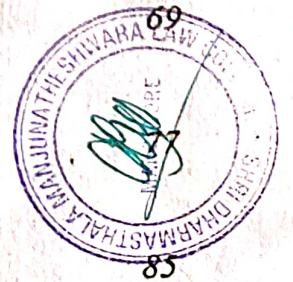
ARTIFICIAL INTELLIGENCE AND ITS IMPACTS ON IPR

(Peer Reviewed)

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ARTIFICIAL INTELLIGENCE AND INTELLECTUAL PROPERTY – ISSUES AND CONCERN

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Abstract

Early philosophers predicted that machines would eventually outperform humans in intelligence. Computer technology strengthened this perspective, and now real machines and robots are learning capabilities. In the years since its inception, artificial intelligence (AI) has grown from a starling technology to one of the most promising. Using data analysis and user preference patterns to achieve the best possible outcome in the market is all part of the machine learning process. AI's utility is necessitated by the growing need to manipulated and organize vast amounts of data.

Artificial Intelligence (AI) is expanding at an exponential rate in the entire world. The issue of IP management in AI is brought up by this boom. AI in IPR is like a two face of the same coin, where its having both pros and cons, for instance in certain aspects, it will seem advantageous in areas like patents and patent search engines, accurate and relevant research, and providing a way to categorize inventions and concepts. However, because AI gives inventors access to other patents that are similar to their own, it may end up being a threat to creativity and growth, two things that are at the core of intellectual property rights.

The debates and challenges surrounding copyrights, patents, and other intellectual property matters are still being developed in the field of artificial intelligence (AI), one of the rapidly evolving areas of technology and law. The main point of contention is the relative importance of human labour versus AI generated resources. This paper mainly focuses on issues or challenges faced by AI and IPR.

Keywords: *AI Algorithms, DABUS, Intermediary, Ethical AI, Training Data.*

Introduction

Artificial Intelligence is a termwhich seems like everyone familiar but on the other hand it is also a mystery in public debate. One of the reasons for the mystery of AI is broad scoop of AI and its application in the field of technologies and techniques

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which enables machines to perform task that typically require human intelligence, this task may be recognition of images, speech and any learning from data. We have been using AI knowingly or unknowingly in our daily lives, that may be fastest way of using Google search or that may be Instagram which shows your interests based on your recent views in the app. Major developments have occured in the last four to five years, driven by a groundbreaking class of AI Algorithms which is known as Generative AI, which now read and interpret text in a manner similar to human intelligence[1]. AI is a technology that has the potential to revolutionize many industries. It has emerged as significant tool. The quick development of AI brings up number of questions and concerns regarding the Intellectual Property Rights (IPR). The application of AI in IPR raises questions regarding legal issues as well as ethical issues, whether the privacy (data protection) of users, ownership of content which is generated by AI protected. At this juncture this paper focuses on issues and challenges that faced by AI in IPR, what will be future of AI, how it will work and what will be the legal status of AI in IPR.

What is AI in IPR?

The term Artificial intelligence coined by John McCarthy in the year 1956 and he defined AI as "the science and engineering of making intelligent machines."[2] To consider machine as "intelligent" the term intelligent must be defined, the ability to solve complicated challenges draw connection and make generalisation can all be considered intelligence. Computer science, physiology, philosophy are all used to create Artificial Intelligence.

Artificial Intelligence means work done by a machine without Human involvement, machine can be interpreted as Computer. Artificial intelligence aims to enable computers to perform the tasks that human mind can do. It involves psychological skills such as association, motor, perception, prediction, control, planning that is to achieve human goal[3]. Practical application of AI found in the home, cars, hospitals, banks, internet which includes Internet of Things (IOT). The term Internet of Things refers to the network of actual physical object, that are connected with sensors, software, and other technologies as to communicate and share data with other internet connected devices and other systems. These electronic devices vary from ordinary home appliances to highly advanced industrial appliances[4].

[1] AI Boon or Bane? India Today. Special Issue - future trends. Volume 49 - number 3. 15 January 2024. Page No. 6

[2] Akshara Joshi, Gautham Mishra. Artificial Intelligence. 26 February 2010. https://dl.acm.org/doi/10.1145/1741906.1742236#:~:text=In%201956%2C%20John%20McCarthy%20who, engineering%20of%20making%20intelligent%20machines. last visited on 18th Feb 2024

[3] Margaret A. Boden. AI: its nature and future. Oxford University Press, Incorporated. 2016-07-01. https://ebookcentral.proquest.com/lib/inflibnet-ebooks/reader.action?docID=4545415. last visited on 18 Feb 2024

[4] What is Internet of Things (IoT). Oracle. https://www.oracle.com/in/internet-of-things/what-is-iot/#:~:text=The%20Internet%20of%20Things%20(IoT)%20describes%20the%20network%20of%20physical, and%20systems%20over%20the%20internet.

Last visited on 18 Feb 2024

AI in Intellectual Property Rights means the applicability of Artificial Intelligence techniques and technologies in the aspects of enforcing, managing and protecting Intellectual Property Rights like patents, copyrights, trademarks, trade secrets. AI technologies have the potential to radically improve the effectiveness, preciseness of managing Intellectual Property Rights and in enforcing them and it gives enterprises the ability to safeguard their IP in the current scenario of quick changing digital landscape.

Provisions relating to AI in IPR

As there is evolution of technologies there is change in the risks to be faced in that matter. There is a concern that as technology advances at a rapid pace, the legal system may struggle to keep up. But perhaps this is not accurate to reality. The current legal frame work in India can be interpreted strictly or purposefully to adapt to changing circumstances and serve as a regulatory tool. For example, there are various clauses Indian Penal Code, 1860 which superseded by the Bhartiya Nyaya Sanhita (BNS) 2023, it contains several provisions that can be used to combat deepfakes that harm individuals, their privacy and dignity. The Information Technology Act, 2000 (as amended) and its regulations, which includes the Intermediary Guidelines of 2021 which tackle several negative effects, including deepfakes, manipulated or forged imagery and misinformation. Provisions thereunder such as Sections 66C identity theft, 66D cheating by personation, 67 obscene content, 67A sexually explicit content, and 67B child pornography IT Act may be invoked based on the facts of the case[5].

Another area of law that has been affected by AI is IPR claims. The numerous cases related to AI in US serving as a model for the development of AI Jurisprudence India. In *Thaler V. Perlmutter (2023)*[6], the US District Court upheld the Copyright registry's refusal to register an AI generated painting. Dr Thaler's filing naming the AI system DABUS[7] as inventor was upheld by an Australian court. This case will certainly impact other copyright claims too, including for source code. In *John Doe et al V. GitHub Inc et al*[8] before the California Court, which contests the right of Microsoft, GitHub and OpenAI to use open-source codes to train AI models and claims that the codes generated through AI, therefore, violate the terms of licencing is likely to impact the very process of AI generated content. (Open-source software or code – Software that is provided under a licence that allows users to study, alter and share the program and its source code with anybody for any purpose is known as

[5] The Information Technology Act, 2000 (as amended). Intermediary Guidelines of 2021.

[6] *Thaler v. Perlmutter*, Case 1:22-cv-01564-BAH (D.D.C., Aug. 18, 2023). https://itsartlaw.org/2023/12/11/case-summary-and-review-thaler-v-perlmutter/#post-61801-footnote-ref-0. last visited on 18 Feb 2024

[7] *Thaler v. Commissioner of Patents (2021)* FCA 879. https://itsartlaw.org/2023/12/11/case-summary-and-review-thaler-v-perlmutter/#post-61801-footnote-ref-. last visited on 18 Feb 2024

[8] John Doe et al V. GitHub Inc et al 22-cv-06823- JST. https://caselaw.findlaw.com/court/us-dis-crt-n-d-cal/2200493.html. Last visited on 18 Feb 2024.

Open-source software. This type of software is licenced under a copyright holder. Software that is open source can be created in a cooperative, transparent way.[9] India's strategy documents, like those of any other country, are primarily focused on the economic benefits of utilizing technology and its advancements. The NITI Aayog's 2018 paper, "National strategy for Artificial Intelligence"[10] and its follow-ups in 2021 and 2022 and the ministry of electronics and information technology's four-part report on AI, provided direction for AI adaptation under the hashtag #AIforAll.

It seems evident that artificial intelligence (AI) is here to stay and will advance civilization through a variety of application cases. The necessity of appropriately implementing artificial intelligence has become increasingly apparent over time, and it is crucial to do so without impairing or violating individual rights, corporate rights, or state interests. To make this possible, the law must be a major factor. India needs to establish a presence in the legal landscape by creating laws that not only meet security and protective standards but also provide businesses with the predictability and trust they need to develop and prosper.[12]

Issues with regard to AI in IPR

Issues with regard to intersection of AI and IPR are multifaceted and they are evolving continuously.

Some of the issues with regard to AI in IPR:

1. **Ownership and Inventorship:** There are many obstacles in identifying who invented what when it comes to AI-generated inventions. Conventional patent law normally needs human inventors, but artificial intelligence (AI) is becoming more and more integrated into the creative process. Concerns are raised over who should possess the intellectual property rights to ideas created by AI and whether AI is capable of becoming an inventor.

2. **Copyright and Creative works:** The potential of AI to produce literary, artistic, and musical creations creates concerns over copyright ownership. If AI-generated works are to be protected by a copyright, who should be credited as the author? Furthermore, problems like content scraping and automated content generation that arise from AI systems violating copyrighted content must be resolved.

3. **Data Ownership and Access:** Large volumes of data are frequently needed for AI's operation and training. When sensitive or proprietary data is involved, ownership, access, and licensing issues become more prevalent. In this environment, figuring out the rights and duties of users, developers of AI, and data suppliers is essential.

9. Open-Source Software. https://en.wikipedia.org/wiki/Open-source_software. Last visited on 18 Feb 2024

10. https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf. last visited on 18 Feb 2024.

11. https://www.niti.gov.in/sites/default/files/2021-02/Responsible-AI-22022021.pdf. Last visited on 18 Feb 2024.

12. AI Boon or Bane? India Today, Special Issue - future trends, Volume 49 - number 3, 15 January 2024. Page No. 42, 43.

4. **Patentability and Prior Art:** Artificial Intelligence is developing quickly, resulting in new discoveries and advancements. But it can be difficult to decide if an AI-related invention is patentable, particularly when prior art and the degree of human creativity are taken into account. To appropriately evaluate patent applications pertaining to artificial intelligence, patent offices must modify their review procedures.

5. **Trade Secret and Confidential Information:** Trade secrets and private data can be analysed, safeguarded, or improperly obtained using AI technologies. Businesses have many difficulties in protecting trade secrets from AI-enabled threats including algorithmic reverse engineering and data breaches.

6. **Ethical and Bias Concerns:** IPR concerns and ethical challenges related to AI, such as accountability, transparency, and justice, interact. AI algorithms that are biased may produce unfair advantages in intellectual property disputes or discriminatory results. To reduce these concerns, ethical AI development and application are crucial. (Ethical AI - The creation and application of artificial intelligence systems with an emphasis on justice, accountability, transparency, and respect for human values is known as ethical AI.[13])

7. **Licensing and Technology Transfer:** Intellectual property rights, such as patents, copyrights, and trade secrets, must be carefully taken into account when negotiating licensing and technology transfer agreements incorporating AI technologies. Because AI technology is always evolving, it can be difficult to determine the best license terms, royalties, and liability policies for innovations connected to it.

8. **Standards and Interoperability:** It is necessary to address intellectual property rights concerns, particularly those pertaining to patents and licensing, in order to develop technical standards for AI systems. Fostering the development and use of AI requires striking a balance between the need for innovation and interoperability and the protection of intellectual property rights. (Interoperability - 'The degree to which two products, programs, etc. may be used together, or the quality of being able to be used together' is the definition of interoperability. It describes how two or more systems or components can use or analyse the information that has been exchanged, as well as exchange information.[14])

Suggestions

While utilizing the AI in the context of IPR several measures can be taken to co and ensure the effective and ethical use of AI.

Some of the concerns that can be taken while using AI in IPR:

1. **Transparency and Accountability:** Taking steps to ensure that AI syste in IPR procedures are developed and deployed transparently. Provide docu

13. Ethical AI. https://www.holistical.com/blog/what-is-ethical-ai?:~:text=EU refers%20to%20the,and%20respect%20for%20human%20values. Last visited on 18 F

14. Interoperability. https://indiaai.gov.in/ai-standards/interoperability. Last visited

of the methods, data sources and techniques used to improve accountability and make audits and review easier.

2. Ethical Guidelines and Frameworks: Considering the moral standards and legal frameworks regulating AI usage in IP. To reduce potential biases and ethical hazards related to AI algorithms, develop and implement regulations that place high priority on fairness, openness and non-discrimination.

3. Data privacy and Security: To safeguard sensitive data utilized in AI driven IPR procedures, set in place strong data privacy and security measures. To prevent unauthorized access or misuse of personal and private data, adhere to any data, protection legislation and standards.

4. Human Oversight and Intervention: To guarantee accountability and reduce the possibility of biases or errors, integrate human monitoring and intervention methods into AI system used for IPR. When necessary human specialists ought to be able to examine and modify AI generated results.

5. Intellectual Property Protection: Protecting AI related inventions IPR through trade secrets, copyrights and patents. Evaluate the uniqueness and patentability of AI generated inventions by conducting in depth IP searches and analysis.

6. Training Data Quality and Diversity: Assuring the representativeness, variety and quality of the training data that goes into creating models for IPR applications. Avoid skewed or biased datasets that could create inconsistent results or reinforce inequality. (Training Data – An AI model or machine learning algorithms is taught to make correct decisions using training data, which is labelled data. To develop a model for an autonomous vehicle, for instance, need training data that identifies cars, people and traffic signs. This would involve labelling photos and videos.)[15]

7. Regular Audits and Assessment: Evaluating AI system used in IPR on regular basis to make sure they work well, are accurate and adhere to the ethical standards. Resolving any problems or inconsistencies found during audits as soon as possible.

8. Education and Training: Educating and training those involved in the creation, application and usage of AI in IPR. Encourage the use of ethical concerns, legal requirements to improve the deployment of AI responsibly.

9. Cross-disciplinary Collaboration: Addressing the complex issues at the nexus of AI and IPR, encouraging cooperation amongst a wide range of stakeholders, including engineers, legal experts, ethicists and policymakers. Combine resources and experience to create winning plans and solutions.

10. Continuous Improvement and Adaption: Adopting the culture of constant adaption and improvement to stay up with changing regulatory environments and AI technological breakthroughs. Keeping up with new advancements in AI in IPR regulations and emerging trends.

15 https://appen.com/solutions/training data/ text training data 20is la ed 20 data, vsx20street 20sig ovs eople. ast visited on 12

Addressing all these concerns or measures requires multidisciplinary approach which involves policymakers, ethicists, technologists, legal experts and other stakeholders. Collaborations and dialogues are essential to develop effective strategies and frameworks for managing AI in the context of IPR.

Conclusion

In conclusion, there are advantages and disadvantages to the incorporation of AI with IPR, especially while considering India. India one of the top centres of innovation and technology worldwide, is well-positioned to use AI to improve its IPR environment, encouraging creativity and safeguard IP. But in order to fully utilize AI in IPR, a number of important issues need to be resolved.

First and foremost, India has to set precise rules and laws controlling the application of AI to IPR procedures. This will entails resolving concerns about who owns and is the inventor of inventions produced by AI, guaranteeing accountability and transparency in AI algorithms and protecting the security and privacy data.

In order to create thorough framework for responsible deployment of AI in IPR, the stakeholders, legislators, legal professionals, engineers and industrialists need to cooperate together. To standardise norms and laws across jurisdictions, this cooperation should also include international partners.

For professional involved in the creation, application and usage of AI in IPR, India has to make investments in educational and training programs to increase capacity and awareness. This includes giving legal professionals, how to handle tricky moral and legal dilemmas brought on by AI driven advancements.

India should support AI research and innovation that is suited to the unique requirements and difficulties of the IPR sector. Creating AI tools and solutions to improve copyright protection, automate trademark analysis and expedite patent searches.

Ultimately, India can open up doors for economic growth, technical innovation and global competitiveness by integrating AI in IPR with a strategic and forward-thinking strategy. India has potential to become a pioneer in utilising AI to safeguard and advance IPR in the digital era if the correct laws, partnerships and financial commitments are put in place.

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