

Safeguard the Inventions of Artificial Intelligence

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Abstract: Artificial intelligence is a growing field of technology and due to the combination of machine learning with deep learning impossible things are now possible in the real world and helpful to perform predictive analytics. It's the ability to think and learn from experience used in multiple domains like E-commerce, education, navigation, robotics, Gaming, Agriculture, speech recognition, social media, data security, etc. To regulate IPR with AI, some issues of patent and copyright need to be addressed as and legal framework for protecting Artificial Intelligence applications. This paper discusses the Intellectual Property Rights to safeguard AI inventions. Then we discuss the AI issues and improvements required for protecting IPR in cyberspace.

Keywords: Intellectual Property Rights (IPR), Artificial Intelligence (AI), Patent, Copyright.

1. Introduction

Intellectual Property (IP) refers to the invention or creation of human intelligence such as artistic work, logo, graphics, literary, technical, business, or scientific creation. Artificial Intelligence is intelligence by machines, boundary is currently being extended aggressively by humans which act autonomously. In the past few years, Artificial Intelligence (AI) has become a promising technology. In day-to-day scenarios, AI can process large volumes of data, detect trends, and analyze the best solutions efficiently. For example, an intelligent Traffic management system based on AI in big cities like Delhi and Mumbai can be designed with a camera installed for real-time solutions based on historical trends of traffic flow during peak hours. AI is being used by utilities to control electricity usage and detect device failure. AI is being used by mobile operators to manage connectivity and increase customer experience [1].

Intellectual Property Rights (IPR) refer to the exclusive rights granted to the inventors or creator or founder of his property (patent, copyright, trademark) or design for a certain period. The World Intellectual Property Organization (WIPO) is the international forum for intellectual property (IP) policy, services, information, and cooperation to safeguard property. This allows people to profit from the property created by them, as well as safeguard the idea.

In Cyber theft criminals use technology to theft the digital content of a victim for malicious acts like phishing, viruses, worms, scams, data breaches, etc. So, the protection of Intellectual Property has become challenging due to the availability of data online. As a result, protecting AI inventions through Intellectual Property has become important in Cyber Space.

The laws for the identification of inventors are important for different AI applications. Existing Intellectual Property (IP) laws are not capable of addressing issues concerning the identification of inventors and other violations where Artificial Intelligence (AI) is involved in work creation. With the growth of AI, proper laws and policies need to be enforced.

1) IPR and Artificial Intelligence

When using IPR with Artificial Intelligence many inventions are done with AI machines, such questions come with IPR for

the programmer or the organization which done inventions with the AI or AI. UK patent office states that AI cannot declare itself the creator of the invented applications. Each creator needs to indicate that he is the creator of the patented application and further, some information is required like the invention name, name of the creator, address of the creator, etc. In the Indian Patent Act, the mathematical theorems, programming and are non-come under patentable identities. In case technical issues resolve the creation, the invented codes come under patentable. When upgradation is done on the software at regular time intervals it is also patentable.

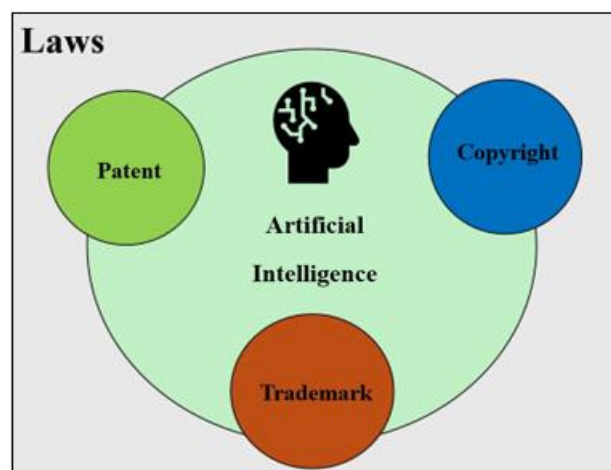


Figure 1: Artificial Intelligence with IPR

2) AI and Copyright

Copyright mainly protects the computer codes. The old laws made for Copyright are not able to recognize work generated by the AI. These laws only safeguard the inventions made by human beings. According to the UK Copyright Act, if work is generated by the computer, in that case, the creator is taken to be the person who helps in that creation or invention. According to, Section 2 (d) of the Indian Copyright Act, 1957, the "author" "to any literary, dramatic, musical, or artistic creation by the machine or computer - generated, the human being who is the reason for the work to be created. The main issue arises and becomes complicated when AI is used at the advanced level and able to make stand-alone decisions. So, it is difficult to identify who has made the necessary arrangements for the created work. Currently, human beings can benefit from copyright law for their creation. So, there

should be copyright laws that computer programs or codes used in AI safeguarded by copyright.

3) AI and Patents

The patent is the right given for a creation like a new method of doing something or providing a newly invented technological solution to a problem. AI can work like a human being to make comparisons between data of patented applications. The invention made by AI must be protected under patent laws. Now, here the question arises of who the creator of AI - based inventions should be. Whether AI - generated creation should be safeguarded under patent law, and if so, the decision should be made about who should be considered the creator of such AI - related inventions. These fundamental questions should be addressed urgently.

4) IPR Laws and Rights for AI

In AI - related creations, the creator identification is difficult to whom ownership should be provided, "to the human being who created the creation or who owns the creation or who is the author for the algorithm.

Artificial Intelligence can create, file, and safeguard Intellectual Property. Some studies about copyright law only safeguard intellectual creation by the human mind. Some organizations declare that they will not register the work made by computer or machine.

Here the question arises as to whom ownership should be given to the AI work created by the AI Robot. How to divide the ownership where multiple entities are involved in the creation. When plagiarism is detected on the AI - related work who will be responsible for that? These are the main questions that are associated with AI and IPR.

Challenges arise while using AI with intellectual property

Artificial Intelligence is having lots of benefits in the field of technology and many improvements are also necessary in the field of Intellectual Property.

Ownership of Intellectual Property: Protection can be provided for the inventions made by computers. AI can easily help in artistic work, literature work, graphics, or medicines. Under patent law, the new technology and medicines can be protected. However, how ownership of work will be divided is the main concern issue. Who owns the property the person who created AI, the organization, or the person who has created AI?

Violation of Intellectual Property: We have already discussed the different aspects of Artificial Intelligence's ownership of Intellectual property. What will happen if Artificial Intelligence violates the Intellectual Property law? If work is created by the computer or machines who will be responsible for the IPR violations? The main violation occurs when actual work is copied. While creating work with the computer machine has internet access so due to this high availability of information or data on the large network the violation chances are higher. So, here arises the requirement of the laws for the work created by Artificial intelligence. If this happens how to act on AI machines in case of copyright violation? There is a need for laws to deal with such violations.

Artificial Intelligence and New Customer: Customers play an important role in Trademark Law. The main problem occurs when New Customers are not aware of the trademark. Trademark violation is the main problem in cyberspace for breaking the IPR. With the advancement of AI, it is possible that computers can do shopping or e - commerce - related work. Here AI machines can get confused between various things with the same trademark. So, there is a need for AI - skilled personnel for the usage of AI applications. There may be new laws introduced soon for AI - related inventions that patent the work created by AI machines.

Technological Variation and Market Competition: As technology changes with time, it's difficult for e - commerce companies to follow IP laws and take proper steps to protect IP rights.

IPR for Limited Geographical Regions: Intellectual property laws made for specific countries become a new challenge when AI is working with different country boundaries. Only a few countries have laws to protect AI - created work, this makes it difficult for business at the international level beyond one country level because every country has different laws for AI - invented work.

Improving the Administration of Intellectual Property

Proper laws should be there for the Intellectual Property regime at the international level. This will help to reduce the cost of individual creation for patent and copyright work when integrating AI with IPR. Clear cyber law and policy should be mentioned for ownership and division of AI - created work between the AI, organization, and individual. Proper rules and guidelines should be there for the assignment of invented work authority to humans and non - humans to promote AI - related work.

2. Conclusion

IPR law will have a great impact on future inventions in AI - related work for business at the international level, so these laws should be maintained and followed properly. Specific laws for liability should be there in case of IPR violation. There is the requirement of the law of patent violation in case of the invention with AI machines. To promote technological growth in AI the assignment of authority to machines is important. It is important to find out the responsibility when the violation occurs. AI laws must be adaptable to the technological changes with AI. This allows the present IP to continue progress in the field of invention.

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