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## Convergence of Artificial Intelligence with IP Laws

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*Are you looking for a restaurant to have some lunch? Don't worry, your phone knows more than you because now you can just ask Siri! Technology has indeed made our lives easier but there is a fear of what else is this technology capable of. We now have entered the world of Artificial Intelligence [also referred to as, "AI"]. Emerging innovations have had an impact on our daily lives from point to point. Machine learning innovations are the most recent technological breakthroughs observed in the contemporary generation. Artificial intelligence signifies automated innovation that performs various tasks in a sense reminiscent of individual cognitive thinking. Nursing, schooling, advertising, information exchange, and other fields all rely heavily on artificial intelligence. In the years ahead, AI is going to have a greater influence on the planet, particularly in the IP (Intellectual Property) sector. AI can be utilized to enhance perspective and streamline time-to-time tasks that were formerly controlled by documents, handbooks, and lengthy judgement call mechanisms. Without a dread, Automated systems are equipped to create IP-preserved content. Is the AI device, however, the whole first sole proprietor of intellectual property? We are currently in the throes of an AI scientific revolution, which raises a variety of concerns for intellectual property law, notably whether the ongoing legal structure is appropriate for the task in the era of autonomous robots. This paper seeks to concentrate on the effects of AI on trademark, patent, and copyright law, as well as how IP law is adapting in this Era of digitization.*

**Keywords:** *artificial intelligence, technological breakthroughs, ip sector, ip law.*

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## INTRODUCTION

*"The upheavals [of artificial intelligence] can escalate quickly and become scarier and even cataclysmic."*

*- Nick Bilton, American Journalist.*

Be it Voice Assistant, Amazon Echo, or an espresso machine, our lifestyles have become increasingly reliant on them. We like the idea of an intellectual capacity equipped in a fridge advising that we should start making dinner or a smartwatch saying to us that we will be having a high BP in 60 minutes. On the contrary side, there is concern that these "intellectual" bots will seize ownership of our existences, from when we wake up to what we stream on Hulu or HBO Max to snacking, touring, emailing, and so on.

The broad view debate concerns whether this new tech would be advantageous to humanity or will it mean the mankind race's final straw. Today's modern technology is developing at breakneck speed, and among the most turmoil technologies this epoch has generated is artificial intelligence. With much more sophisticated software running in them, AI's implementation has begun to expand at a rapid pace. Automation systems have proceeded from simple simulations to the emergence of songs, paintings, and various other more refined aspects of creative work. A "Super AI" computer system could also be in a position to create innovative products or pharmaceutical drugs that are patentable. This poses a variety of concerns and obstacles for the intellectual property sector, which will almost certainly require to be addressed in the coming years. This paper identifies artificial intelligence (AI) and explores how it overlaps with the intellectual property (IP) sector, with a concentrate on the effects of Artificial intelligence and machine learning on copyright, trademarks, and patents. In addition, in this paper, we examine a few of the potential concerns that we foresee will emerge while these Ai systems progress, along with the complexities that the Court system will ultimately explore.

## ARTIFICIAL INTELLIGENCE AND ITS CONNECTION WITH IPR

The concept "Artificial Intelligence" was coined by John McCarthy at Dartmouth College in New Hampshire in 1956<sup>1</sup>. "Artificial intelligence" is the acumen displayed by automated systems that can complete duties more quickly than humans. Artificial intelligence is becoming increasingly important in industries such as medicine, training, financial management, advertising, and information exchange. Even so, it was becoming unclear if the computer's effectiveness was the consequence of its internal intellect or information or orders. Mister Alan Turing (the mathematician) proposed the "Turing test" trial to address this issue<sup>2</sup>. The process desired users to engross in a SMS communication with a machine and afterward demonstrate whether participants assumed they have been talking with an individual or a device. Mister Turing defined artificial intelligence as answers that seem to be unfathomable from legitimate human interactions. Although it is true that such an experiment has indeed been utilized for a couple of decades, it has only been used on verbal gadgets and very few interrogating software products. Artificial intelligence has advanced significantly in recent years, differing in detail that it will eventually eliminate human civilization.

Did you ever ponder how Machine learning and IP became linked? Once the utilization of these Intelligent machines became widespread, individuals tried to obtain shelter for their outcomes. Nevertheless, the denial of authorship for a fantasy book in 1956 crushed these candidates' hopes. As a result, it's really no mystery that Machine learning and IP are intermingling in numerous aspects. AI and IP intertwine in three significant aspects<sup>3</sup>: AI as an innovation that can assist in the management of the intellectual property; IP as a tactic for AI protection; and IP as a shield to the vividness of Automated systems. This demonstrates that AI and intellectual property have a mutually beneficial arrangement, as both AI and IP impact one another in some form.

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<sup>1</sup> Swapnil Tripathi & Chandni Ghatak, What is Artificial Intelligence? (*Artificial Intelligence and Intellectual Property law*, 2018) <<https://core.ac.uk/download/pdf/236436865.pdf>> accessed 01 January 2023

<sup>2</sup> Alexander Gillis, 'What is the Turing Test?' (*Turing Test*) <<https://searchenterprisedi.techtarget.com/definition/Turing-test>> accessed 01 January 2023

<sup>3</sup> Céline Castets-Renard, 'The Intersection Between AI and IP: Conflict or Complementarity?' (Springer, 2020) <<https://link.springer.com/article/10.1007/s40319-020-00908-z>> accessed 01 January 2023

The very first substantial integration between "Artificial Intelligence and Intellectual Property" is the Application of artificial intelligence as an innovation that really can assist in intellectual property rights management. AI in intellectual property governance is progressively being employed in the planning of implementations for Data encryption. A slew of other AI methods had been proposed and implemented by IP overseas branches. The "World Intellectual Property Organization" (WIPO) organized an event in May 2018 to investigate such Intelligent automation and incentivize their connections and the framework that enables it. The second notable point of alignment between AI and IP is an intangible asset as a strategy for AI protection. Intellectual property is a regulatory structure that will protect AI. AI is already influencing the creation, advancement, and distribution of advertising and sociocultural goods and accounts, and it is anticipated to have a significant influence in the coming years. One of the main aims of intellectual property is to encourage innovation and imagination in technological and financial sectors where AI and IP frequently coincide. Numerous intellectual property laws may apply to AI. On a side note, WIPO national governments prompted the organisation to collate the major state devices pertinent to AI prerequisites.

The third important integration between AI and IP is intellectual property as a shield to Ai software clarity. If someone contends that AI machineries can be protected by intellectual property laws, the likelihood that intellectual property ownership rights will be an obstacle to Ai software inclusivity grows. Despite the current nudge for increased accountability and transparency in automatic system judgement call organisational level, the issue still remains in determining how to meet this standard when an artificial intelligence program necessitates numerous data origins, intricate formation, and ambivalent facets, either for technological or legal purposes. Intellectual property laws and commercial secrets may create certain barriers, culminating in a prevailing opinion dispute between intellectual property safeguards and the widespread willingness for inclusivity and responsibility. All the same, the disclosure needed to accomplish these goals doesn't really entail the computational regulations themselves, but instead the results of their execution - which is, elaboration as a consequence of their execution. In other phrases, there isn't any risk of intellectual property or confidential or proprietary

infringement. Moreover, some of these advantages should not be utilized to avoid Artificial intelligence technology from being disclosed and explained.

In the meantime, Information systems are not considered persons, and no particular rule stipulates who is entitled to the intellectual rights to whatever content they generate<sup>4</sup>. As a consequence, there is ample room for expansion in this field of legislation. The current Ip law framework must be rethought so that an Intelligent system can be motivated to create quality information. If AI progressively disconnects itself from human behaviour, legal issues about possession will grow more questionable and intractable in the near future.

### **ARTIFICIAL INTELLIGENCE AND COPYRIGHT**

Copyright is a critical component of intellectual property rights<sup>5</sup>. Today's copyright law not only protects the licensing owner's rights, but it also serves the purpose of critical interest and strives to strike a mix of the two in the electronic era. In a broad sense, the grant of copyright consists of three main components: originality, expressions, and fixation. The hypothesis of "copyright" has grown in importance in technology in modern, financial, sociocultural, diplomatic, and constitutional situations, not only in India but globally. Technological developments, particularly artificial intelligence, have sporadically brought up multiple difficulties to copyright laws, prompting countries to modify their legislation.

For quite a great many years, humanoid robot performers have been engaged in numerous kinds of artistic creations. Machines have been generating primitive artistic creations ever since the late 1960s, and all these endeavours stand unabated<sup>6</sup>. The majority of such machine artistic creations depended solely on the developer's innovative thinking; the device was merely an object or weapon, similar to a paint or tarpaulin. However, we are currently in the midst of a

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<sup>4</sup> Jagriti Rana, 'Significance for Intellectual Property Laws for AI' (*Artificial Intelligence and IPR*) <<http://www.legalserviceindia.com/legal/article-2867-artificial-intelligence-and-ipr.html>> accessed 01 January 2023

<sup>5</sup> Dr V K Ahuja, *Law Relating to Intellectual Property Rights* (3rd edn, 2017)

<sup>6</sup> Sik Cheng Peng, 'Artificial Intelligence and Copyright: The Author's Conundrum' (*AI & Copyright, 2018*) <[https://www.wto.org/english/tratop\\_e/trips\\_e/colloquium\\_papers\\_e/2018/chapter\\_13\\_2018\\_e.pdf](https://www.wto.org/english/tratop_e/trips_e/colloquium_papers_e/2018/chapter_13_2018_e.pdf)> accessed 01 January 2023

scientific breakthrough that could force us to reconsider the relationship between machines and the generation of ideas. The explosive growth of artificial intelligence technology, a select group of AI technology that generates intelligent agents that can learn without even being fully integrated by an individual, is driving this renaissance.

An intelligent retrieval device program includes a method that enables it to discover from input information and emerge and create strategic choices that can be aimed or unbiased. When implemented in craftsmanship, songwriting, and literature, intelligent retrieval algorithms are simply learning from developers' insight. They use the information to create future tasks, attempting to make autonomous choices all across the procedure to decide how the latest project will appear. While software developers can create rules for this sort of artificial intelligence, the deal is properly produced by the software program on its own - alluded to as a "neural network" - in a method comparable to normal thinking patterns.

The use of artificial intelligence in the creation of creations might have huge ramifications for copyright protection. Customarily, possession of licencing in machine creations was not contested because the program was simply an instrument that aided the innovation side, similar to a traditional pen and paper. Pieces of art are protected by copyright if they are unique, for most interpretations of uniqueness mandate a sentient creator. That many provinces, such as foreign leagues, express that only creations produced by humans are eligible for copyright protection. However, with the most recent forms of artificial intelligence, the software system isn't any instrument; it now tends to make a lot of the choices implicated in the artistic process without the requirement for human input<sup>7</sup>.

Some might assert that this demarcation is unimportant, but how the legal system addresses different forms of device inventiveness may have much further infomercial consequences. By now, artificial intelligence has been employed to create products in songs, news reporting, and online games. Since they were not invented by a single researcher, such projects may be considered legitimate of copyright. As a result, someone can openly utilize and reprocess them.

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<sup>7</sup> VK Ahuja, 'Artificial Intelligence and Copyright: Issues and Challenges' (*AI & Copyright*, 2020) <<https://ili.ac.in/pdf/vka.pdf>> accessed 01 January 2023

This would be disastrous for the retailers producing the projects. Consider investing billions of dollars in a process that creates the soundtrack for online gaming, only to discover that now the song is not entitled to protection but can be utilized without reimbursement by someone on the planet.

As per Indian Copyright law, a project should first accomplish the smidgeon of innovativeness in order to be considered for copyright reimbursement. There isn't any complete conclusion that has emerged in which it has been summarised that an AI cannot satisfy the position of creativeness as anticipated. The necessity for an AI to emerge underneath the auspices of a creator, as expressly stated by the Copyright Act of 1957, is the commensurate requisite for an AI to gratify in aspects of legal responsibility for creations.

But what actually occurs if a non-anthropoid work is encroached upon? A very well instance of the "monkey selfie," a treasured of copyright law's zealots, ignited the debate over the constitutional protections of a copyright-protected creation generated by someone who is not a human<sup>8</sup>. The problem in this instance occurred when a monkey ended up taking a picture with a cameraman's camera and that photograph was released in the artist's memoir. The case was resolved and it was determined that only a living person can file a lawsuit for copyright violation and copyright. Even so, preferred (but not all) nations' copyright laws are relatively simple in this regard. Indian law explicitly says that copyrights may only be kept by a "natural being," which includes corporate interests, enterprises, and affiliations.

The copyright rules in India, or the majority of the community, are relatively simple these times, but as science progresses, challenges like these may arise. And with situations such as these, we can anticipate a few legislations to be amended. In the future, if AI does become adept at altering its possessor's aims and interests, the scenario may enhance. Even if it appears to be a far off and reminiscent of speculative fiction, we will be required to think about creating new forms of legal agencies so that the activities of AI cannot be linked directly to the "author." The "control" of

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<sup>8</sup> Andres Guadamuz, 'Jurisdiction - Can the monkey selfie case teach us anything about copyright law?' (WIPO, February 2018) <[https://www.wipo.int/wipo\\_magazine/en/2018/01/article\\_0007.html](https://www.wipo.int/wipo_magazine/en/2018/01/article_0007.html)> accessed 01 January 2023

such a potential human being, as well as its strength over it, should then be outlined more precisely. The situation is likely to get more complicated as the application of artificial intelligence by creators is becoming more pervasive, and as computers improve at generating artistic efforts, obscuring the difference between artists' work created by humans and artistic work created by computers<sup>9</sup>.

The real difference may be rendered obsolete by colossal technological advancements and the staggering volume of processing complexity; once users start giving a device the ability to recognize designs from massive data of subject matter, it will get ever preferable at emulating living beings<sup>10</sup>. As well as, providing sufficient computing resources, we could pretty shortly be unable to tell the difference between living things and device subject matter. We aren't quite there yet, but in the event that we do, we'll have to make a decision about what kind of preservation, if there are any, we could perhaps grant to emerging and evolving art produced by cognitive computing that requires little or no user intercession. Even though intellectual property laws have deviated from uniqueness benchmarks that remunerate talent, workforce, and hard work, maybe we can make an allowance for the apples of advanced artificial intelligence. The option appears to contradict the reasons for safeguarding artistic efforts, to begin with.

In a better perspective, notable developments in information innovations increase the likelihood that facts and their utilisation will be monitored, enabling the limits and constraints of information utilization to be highly technologically governed. Moreover, marketing channels have developed common terms and conditions to allow data transfer while protecting it from unapproved usages. As a consequence, the transformation of AI, and the manner in which information is swapped and encased under contract agreements, should be closely monitored. For now, it appears that compliance policy to stretch or adjust copyright rights is unnecessary.

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<sup>9</sup> Andres Guadamuz, 'Artificial Intelligence and Copyright' (*AI & Copyright*, 2017)

<[https://www.wipo.int/wipo\\_magazine/en/2017/05/article\\_0003.html](https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html)> accessed 01 January 2023

<sup>10</sup> Haochen Sun, 'Redesigning Copyright Protection in the Era of Artificial Intelligence' (*Artificial Intelligence and Copyright*, 2022) <<https://ilr.law.uiowa.edu/print/volume-107-issue-3/redesigning-copyright-protection-in-the-era-of-artificial-intelligence/>> accessed 01 January 2023



## ARTIFICIAL INTELLIGENCE AND TRADEMARKS

At its most fundamental, artificial intelligence (AI) is a device that has been meticulously created to replicate humanoid creatures' instinctual intellectual ability via studying, sound logic, and judgement. Each and every phrase, title, symbol, arrangement, component, type of good or service, labelling, colour scheme, or any mixture thereof that is incorporated and utilized to describe and distinguish a person's commodities from those produced by others is referred to as a trademark<sup>11</sup>. The primary objective of trademark law is to safeguard the privileges of people who make and sell goods with unique trademarks from being encroached on by individuals who misrepresent their objectives and then use fraudulent trademarks. The impact of AI technologies on everyday activities and the manner in which products and services are purchased, which is the topic of discussion of trademark law, is expanding. Over the last century, there have been three insurgencies in the way people purchase stuff, and a fourth is on the horizon, if not currently here<sup>12</sup>.

It now seems obvious to affirm that AI Technology represents the next phase in this sequence of business upheavals, and thus Trademark law. To render putative suggestions to purchasers, e-commerce websites use Machine learning computational processes. They interpret and establish information acquired on our internet history, priorities, purchasing characteristics, and a plethora of other subtleties. It is critical to point out here that the really important principle of a trademark is now being rendered obsolete by the use of Automation system applications. AI can be considered a viable tool for depriving clients of their prerogative in selecting the products they desire. This is both captivating and perplexing to note that, while the person believes he has access to the goods of his preference or has authority over his judgement procedure, the majority of people are oblivious of this constraint placed on their options.

'Roy Amara,' an American strategist and forecaster, stated, "We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run."<sup>13</sup> The profound

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<sup>11</sup> Dr V K Ahuja (n 5)

<sup>12</sup> Lee Curtis & Rachel Platts, 'Trademark playing catchups with Artificial Intelligence?' (WIPO, June 2020) <[https://www.wipo.int/wipo\\_magazine\\_digital/en/2020/article\\_0001.html](https://www.wipo.int/wipo_magazine_digital/en/2020/article_0001.html)> accessed 01 January 2023

<sup>13</sup> *Ibid*

impact of AI technologies as to how individuals obtain goods and services, as well as the repercussions for trademark law, is frequently overlooked. The vast bulk of critics concentrate on the effects of AI on copyright, patent, and design law, and the introduction of new technology has created several challenges to the primary characteristics of trademark law.

With all this remarkable progress throughout the spot, humans have seen a sharp rise in the industry for AI support brands. Chromecast, Amazon Alexa, Apple AirPods, Bixby, and other similar devices have indeed been constantly advancing, with corporate entities releasing modern upgraded ones with increasing proficiency in emulating human thinking and preferences<sup>14</sup>. However, it is critical to consider the potential consequences of using these goods when producing real-world decisions. For example, if an individual utilizes one of these Automation system applications to arrange a specific item, and the classifier selects the most appropriate choice based on information gathered by tracking the customer's selections and preferences, how does this get to decide the culpability of these kinds of judgements? Whereas if the buyer receives a good that later turns out to be fraudulent, or if there exists a significant difference in the required amount or standard of the item thus purchased, will digital behemoths like Microsoft or Apple be made responsible for such intrusions? Should they be responsible for the foremost violation of the item company's IP rights, for whom the charitable notoriety for his commodity has been utilised? More pertinently, fundamental aspects of trademark law such as "probability of uncertainty," "unwitting consumer," "inherently flawed memory of the events," and so on rest unanswered in this advanced Ai assessment. All of those are grave doubts that necessitate prompt resolution in order to support the interconnection of "AI and trademark law".

The current scenario has "far-reaching" implications for trademark legal systems. And besides, trademark law deals with the marketing funnel, the manner in which goods are bought, and the customer's interaction with the corporation. The purchasing procedure is affected by the customer's ingress to details as well as the entity that tries to make the purchase intention.

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<sup>14</sup> Harsh Pati Tripathi, 'Impact of Artificial Intelligence (AI) on Trademark Law: Convergences and Ramifications' (*AI & Trademark*, 2021) <<https://iplawindia.org/wp-content/uploads/2021/04/Harsh-Pati-Tripathi.pdf>> accessed 01 January 2023

Artificial intelligence influences both the material offered to consumers and their purchasing decisions. Moreover, trademark law is based primarily on human frailty precepts. Whatever is left in trademark law after the terms "living thing" and "fallibility" have been eliminated?

Even though not a single trademark law did yet enter that level, several other law scholars have examined the much more probable methods wherein trademark law may acclimate to AI<sup>15</sup>. They suspect that AI programs, for instance, are unlikely to be found culpable for trademark breaches until they are notified of intruding action. This is due to Ai tools are really not being designed to contravene laws governing intellectual property except when they are employed to do so. When AI programs and devices are implicated in trademark mechanisms, they are probably going to be addressed similarly to Internet service suppliers who are correspondingly engaged in such challenges. Any proficient trademark representative will now have adjusted to laws concerning intellectual property that have recently been reconfigured to satisfy Automation in due course.

Trademark registration aims to prevent each and every uncertainty surrounding an emblem, aesthetic appeal, wrapping, or any additional labels that identify a specific firm or corporation so that customers are not confused. It is challenging to figure out how Artificial Intelligence can encroach on a registered trademark, and concerns similar to intellectual property law can spring up. There have recently been incidences in which the issue of trademark violation with regard to Artificial intelligence and machine learning has arisen. Within a particular instance of "*Louis Vuitton v Google France*", there existed a dispute over particular marketing and the computer-controlled decisions made by Google, which were asserted to infringe on the prosecution's registered trademark.<sup>16</sup>

Nevertheless, the judge determined that there wasn't any infraction except if the person involved actively participated in it. The instance of "*Lush v Amazon*" highlighted the necessity

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<sup>15</sup> Exy Intellectual Property Malaysia and Singapore, 'Artificial Intelligence and Its Impact on Trademark Law, Copyright, Intellectual Property Rights, Trademark' (EXYIP, 2021) <<https://www.exyip.com/2021/06/01/artificial-intelligence-and-its-impact-on-trademark-law/>> accessed 01 January 2023

<sup>16</sup> Pratyusha Ganesh & Vishruti Chauhan, 'Artificial Intelligence in IPR – a door to future' (AI & IPR, 2021) <[https://blog.ipleaders.in/artificial-intelligence-ipr-door-future/#Trademark\\_AI](https://blog.ipleaders.in/artificial-intelligence-ipr-door-future/#Trademark_AI)> accessed 01 January 2023

to construct intellectual property laws for possible developments<sup>17</sup>. Lush had refused to permit Amazon to advertise its goods on its webpage. Amazon purchased the search term 'Lush' through competitive bidding. As just a result, if Lush went looking on Google, Amazon marketing messages will indeed appear. Regardless of whether there were no revenues on the webpage, the Artificial Intelligence would continue to display comparable models predicated on the trawled search term. Lush commenced a lawsuit for violation of trademark, and the judge ruled Amazon complicit.

In accordance with a Gartner study, by 2020, Machine learning will have pushed or influenced 85 % of the total client service perceptions in department stores<sup>18</sup>. Till now, the impact of AI on IPR (IP) has indeed been centered on the patent system and AI-patented invention. Nevertheless, artificial intelligence is already posing a larger danger to trademark law. Trademark legislation has withstood the three "self-service, e-commerce, and social media" revolutions, but the question of whether it can line up with the AI juggernaut goes unresolved. Only time will demonstrate how well the courts decide on Machine learning issues like the average buyer and the possibility of ambiguity.

## **ARTIFICIAL INTELLIGENCE AND PATENT**

A patent grants the inventor of a creation an absolute assertion to the creation, and the copyright owner has to have the authority to prevent someone from creating, spreading or utilizing the patent-protected invention in just about any manner for a specified duration. One more thorny issue is the "non-obvious" provision, which is connected to an invention's patentable subject matter. As per patent law, an inventive advent should be unidentified to an individual eligible in the concept of that notion. In the field of artificial intelligence and its ability to handle elevated levels of cognition and consistency, it's indeed probable that all imaginative theories will be

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<sup>17</sup> *Ibid*

<sup>18</sup> Ray Kurzweil, 'Relevance of Artificial Intelligence to Trademark, Intelligent Trademarks' (WIPO, 2008) <[https://www.wipo.int/export/sites/www/about-ip/en/artificial\\_intelligence/call\\_for\\_comments/pdf/ind\\_revella.pdf](https://www.wipo.int/export/sites/www/about-ip/en/artificial_intelligence/call_for_comments/pdf/ind_revella.pdf)> accessed 01 January 2023

regarded as straightforward to an AI, and if this is the scenario, the requirement for intellectual property protection will be entirely erased.

Artificial intelligence aids in the development of inoculations in drugs, tankers, automotive industry configuration, and satellite communications. What effect does this have on the directly accessed to patent advanced technologies? And how does it affect the innovator components in general? This same complete patent law notion is rooted in the belief that all innovators have character traits. On the other hand, it confronts a significant obstacle in interacting with a creator who is primarily a device. Numerous discussions about intellectual property rights and the operation of artificial intelligence technology are taking place in nations such as the United States, definite European countries, and Great Britain<sup>19</sup>.

A cohort of creators can collaborate in innovation, as well as the innovation process might include goods, methodologies, and future tech strategies that the innovators can use. Innovators with abilities in craftsmanship may well not create something entirely advanced, but they must possess a general understanding of the relevant software industry in order to file a patent. Innovations are competent in being enrolled under the sector and employed in the sector, but they need to have decent economic relevance<sup>20</sup>. AI technology could endeavour the intermediate genuine legitimate laws that comprise the framework of Patent law. One of the most pressing questions that must be addressed immediately is if or not Automation manufacturing must be coated by patent law, and if so, who ought to be regarded as the commander for these kinds of AI-deemed instantiations.

Patent acts and artificial intelligence are extremely important in a variety of industries. These other creations accomplished by artificial intelligence pay little attention to what kind of mortal being is genuinely beyond the emergence. The licencing of a patent takes into account if the

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<sup>19</sup> Akash Varadaraj, 'Is Artificial Intelligence Breaking Patent Law?' (*Vakil Search*, 2022)

<<https://vakilsearch.com/blog/is-artificial-intelligence-breaking-patent-law/#:~:text=While%20dealing%20with%20the%20effect,made%20part%20of%20a%20patent>> accessed 01 January 2023

<sup>20</sup> Jagriti Rana, 'Patents and Artificial Intelligence' (*Artificial Intelligence and IPR*)

<<http://www.legalserviceindia.com/legal/article-2867-artificial-intelligence-and-ipr.html>> accessed 01 January 2023

patentee is sentient. When there is no individual's cognitive presence, patent commentators believe that it will have those certain kinds of ramifications on the patent. Aside from that, this realm confronts another daunting task.

The quandary of creative intelligence versus computer competence, of a person's basic understanding and Intellectual ability versus the ability of a device, is wholly separate. If indeed the revelation isn't really obvious to an individual after kinds of assessments, it is thought to be extremely close to the idea of obtaining a patent. In regards to the future, if the appraisal of AI and its implications for the donation and evaluation of artificial intelligence can be provided, then the obvious stages of the patentable subject matter may also be taken into account. Yet another instance throughout this path is that a process can be used as a testing ground.

In accordance with Section 6 of the Patents Act of 1970, "a proposal for a patent for any innovation may be made only by the true and first inventor of the invention, or by individuals authorised by such author". In contrast, Section 2(y) of the Act limits the notion of "true and first invention" to precluding the principal shipment of advancement into India or an individual toward whom a concept will be first transferred out beyond India and nothing further<sup>21</sup>. As a consequence, adhering to the law on this aspect would be intriguing, particularly the claim made by the patent office when the appropriate and first inventor on the patent filing framework is a different kind of average man.

In any scenario, artificial intelligence will unquestionably play a significant part in the development of patent law. To improve the stage of advancement, sophisticated real-language instruction has been employed in constructing changes to current patent cases. Because they could shape the body of evidence of preceding artisanship that is accessible in the public areas, the pervasiveness of such matters of law using such invention would assist in avoiding simple and directly available opinions from becoming encased.

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<sup>21</sup> Karthiayani A, 'Patents act, 1970 and AI, Artificial Intelligence And Intellectual Property Laws In India: Is It Time For Renaissance?' (*IJLMH*, 2018) <<https://www.ijlmh.com/artificial-intelligence-and-intellectual-property-laws-in-india-is-it-time-for-renaissance/>> accessed 01 January 2023

A further instance of patent law's ambiguity is the devotion of AI in situations in which Machine learning is the violator of patent rights<sup>22</sup>. Also, with changing dynamics of robotic unforeseen creations, just about all AIs are now tailored for infringing on other patents' judicial processes. The devotion subject poses the issue of who ought to be made liable for AI activities, if the AI or the AI's programmer, and also how AI threat can be evaluated. The patent concerns for AI-delivered breakthroughs must be selected by the user regardless of whether the patent claims to AI-delivered breakthroughs would move ahead the objective of patent law or be harmful to human cognition about instantiations.

The regulatory tool of patent law in relation to AI will also have profound implications for advancement, the financial system, and the community. Due to the rapid advancement of Artificial intelligence, involved parties such as patent experts and academics must participate in debates to determine approaches for the patent law to spur innovation. However, sufficient precautions are required to guarantee that deleterious societal and ethical consequences are minimised.

The concern about whether AI-generated innovations must be shielded must be responded to in the illumination of its impacts, both positive and detrimental. If AI-created innovations are patentable, it must be determined as to if the creator should be granted to the AIs that produced those innovation opportunities. The current liability regulations do not take into account patent litigation induced by an AI on its own. It must be ascertained who will be made liable in such cases and how responsibility will be evaluated. All of these problems must be discussed with caution.

### **CHALLENGES FACED BY THE COURT SYSTEM IN THIS ERA OF AI**

The perks of Artificial intelligence are numerous and possess the power to transform several facets of daily life, such as the universe of Intellectual Property; however, the emergence of

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<sup>22</sup> World Economic Forum, 'Artificial Intelligence Collides with Patent Law' (WEF, 2018) <[https://www3.weforum.org/docs/WEF\\_48540\\_WP\\_End\\_of\\_Innovation\\_Protecting\\_Patent\\_Law.pdf](https://www3.weforum.org/docs/WEF_48540_WP_End_of_Innovation_Protecting_Patent_Law.pdf)> accessed 01 January 2023



Artificial intelligence furthermore presents a variety of issues inside the IP sector that will have to be acknowledged with in coming years.

It is without reason to suspect that AI systems can generate source material that can be guarded by intellectual property. AI systems might quickly generate a piece of artwork, a chunk of literary work, a layout, or a fresh company logo<sup>23</sup>. An artificially Intelligent device may be in charge of developing emerging innovations or prescription products that will be eligible for patentability. Because registered trademark possession is really not associated with the individual who invented the threshold, an Intelligence device creating their company logo is highly improbable to result in any ramifications for registered trademark possession, whereas, for other aspects of Intellectual Property, the possession of Artificial intelligence and machine learning generated content is a contentious issue<sup>24</sup>. An 'author,' or the individual who generated the task, is usually the very first sole proprietor of a work of art that has copyright protection. Similarly, the developer is the initial sole proprietor of a "design right", and the creator is the primary holder of a patented invention. Possession is straight associated with the development of the nature of the content in each of these instances.

The notion that such an Intelligence device might be labelled as the creator in a patent filing was rejected in current "European Patent Office (EPO)" decisions. The rulings concern two grant applications in which an Artificial Intelligence called DABUS was named as the creator<sup>25</sup>. In accordance with the mins. of the "non-public" proceeding, another of the key points raised by the claimant of the grant applications is that the "European Patent Conference" does not require the creator to be sentient. This was the initial assessment of its sort well before EPO, and the EPO able to receive Segment quashed this after "21 minutes" of thought and consideration, and the grant applications were denied. The Claimant attempted just to assert that perhaps the Intelligence device was the creator, rather than that it controlled the provisional patent. The case

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<sup>23</sup> Mike Jennings & Ors, 'The challenges of Artificial Intelligence in the field of IP' (*Artificial Intelligence and IP*, 2020) <<https://www.aathornton.com/the-challenges-of-artificial-intelligence-in-ip/>> accessed 01 January 2023

<sup>24</sup> Ertugrul Akinci & Ors, 'Key challenges of artificial intelligence. Intellectual property: Protecting your AI and its creations' (*AI & Intellectual Property Rights*, 2021) <<https://www.businessgoing.digital/key-challenges-of-artificial-intelligence-intellectual-property-protecting-your-ai-and-its-creations/>> accessed 01 January 2023

<sup>25</sup> Mike Jennings (n 23)



posed a variety of intriguing issues about just the privileges of an Artificial intelligence system and also how possession was transmitted from the creator to the Claimant that had not been satisfactorily acknowledged by the EPO.

The rejection of the dispute advanced throughout this scenario recommends that now the EPO is still not willing to consider the concept of Artificial intelligence-based owning Intellectual properties sincerely. In accordance with the judgement, the EPO panels of plea have yet to be asked to rule regarding whether an organization beyond a normal individual can be acknowledged as a creator. As a result, we are still lacking responses to a series of queries, most notably, who is the primary holder of the Intellectual Property where the subject material was sincerely generated by an Artificial intelligence-based device?

The opposite as to whether Machine learning gets to acknowledge intellectual property is whether can it encroach on it. When it is recognised that an Artificial intelligence-based device can produce source material, who will be made liable if that source material violates another party's intellectual property? The issue is especially pertinent in the frame of reference of copyright violations, which necessitates precise cloning, – in other words, the writer of the intruding task must have been given direct exposure to the protected content. The obstacle of proving that the contributory infringement had a copy of the safeguarded task may be significantly simpler to conquer in the particular instance of Artificial intelligence - based device, that we must anticipate having direct connections to all of the content Online. Once more, the idea of Artificial intelligence and machine learning producing source material elevates a variety of complicated points of law, such as whether an Artificial intelligence-based device has enough legal existence to just be prosecuted for breach. Or else, who really is liable for such an Artificial intelligence-based device's copyright violation, and is it simply to grip a person accountable for the Artificial intelligence-based device's activities, and does that person fulfill the requirements of possessing reproduced the task?<sup>26</sup>

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<sup>26</sup> *Ibid*

Enabling Artificial Intelligence to own Intellectual Property has implications for Intellectual Property policing and violation. If Artificial Intelligence has enough legal identity to possess Intellectual Property, undoubtedly it ought to also be capable of initiating possible legal litigation, be prosecuted for violation, insert binding agreements, and be handled as a sentient in every other aspect for lawful reasons. The issue is in fact a much larger constitutional issue about whether Artificial intelligence-based devices can be considered lawful entities. When a bipedal robot called Sophia was becoming a resident of Saudi Arabia in 2017, the world witnessed the very first cyborg to be allowed to immigrate.

Also, with the advent of tools like Alexa and domestic devices that can suggest what to eat for dinner, it is plausible that an Artificial intelligence-based device will arrange your food for you.<sup>27</sup> As a result, we should consider the effect on the typical customer for the purposes of trademark legislation. Could it be feasible for an Artificial intelligence-based device to become perplexed and command the incorrect goods? How can an Artificial intelligence-based device boost the amount of consideration given by the pertinent customer if such products are instructed by an Artificial Intelligence rather than picked by living beings? All such queries remain to be addressed, but they will most probably be responded to as legal precedent in the profession develops.

It is also an issue in patent law regarding how the idea of a competent professional will adjust as Artificial Intelligence innovations progress. The professional worker is a fictitious commenter mentioned in EPO and UK statutory rules, such as when contemplating original creation<sup>28</sup>. The competent individual is assumed to understand terms and ideas in the application sector and to possess the necessary tools for maintenance tasks and exploration. Must it be presumed that the hypothetical professional worker has direct exposure to frequently used Ai technologies? If that is the situation, would it end up making identifying a dearth of inventive steps for Artificial Intelligence-related creations, or even all innovations, convenient?

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<sup>27</sup> Shweta Gupta, 'The future of IP laws and how AI will affect IP laws?' (*AI & IP Laws*, 2021) <<https://muds.co.in/the-future-ip-laws-and-how-ai-will-affect-ip-laws/>> accessed 01 January 2023

<sup>28</sup> Mike Jennings (n 23)

Because AI technologies are typically not adequately safeguarded by intellectual property, the Artificial Intelligence methodologies may be shielded as a commercial entity. Nevertheless, the lawful treatment of trade secrets varies by authority. Company secrets are typically subject to torts committed, secrecy, anonymity, or anti-competitive requirements. One such safeguard doesn't quite negate open and transparent methods of exploration, such as opportunities to make or refactor. Preventing cryptographic techniques of source code in Artificial intelligence and machine learning is also physically complex and legitimately dangerous, as negotiated constraints to accomplish this might well be regarded invalid and unenforceable in certain states.

The general rules of Artificial intelligence and machine learning are still at the point of equilibrium inside this purview of local or international regulations. The legitimate rules and guidelines which will serve as the foundation for the regulatory requirements are still to arise. Within the case of a conflict, the court system may come to another decision than the conditions and restrictions established in the written agreement, and obstacles and discrepancies in terms of Ai technologies and/or one's designs are probable<sup>29</sup>.

## **PRESENT SCENARIO**

There seems to be present no specific law (throughout India or elsewhere) that explains the big picture concern, "Who owns the intellectual property rights to a material created by one's creation?" The existing legislation only considers living beings to be inventors, and thus Intellectual - property owners and the alleged violator. This brings up the topic of analysing the future prospects of the application of these AI systems. It has additionally imposed numerous responsibilities in relation to AI-created tasks<sup>30</sup>.

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<sup>29</sup> Atul Jain, 'Intellectual Property Rights in the Age of Artificial Intelligence, Intellectual Property & AI' (IJLMH, 2021) <<https://www.ijlmh.com/paper/intellectual-property-rights-in-the-age-of-artificial-intelligence/>> accessed 01 January 2023

<sup>30</sup> Pratyusha Ganesh & Vishruti Chauhan (n 16)

## AI & IPR IN THE UNITED STATES OF AMERICA

Throughout the United States, Copyright Law serves to safeguard original representation but not the concepts behind all those representations. As in the particular instance of Artificial intelligence-based data security, no specific rule has been made, however, the Legislation expresses that copyright necessitates "an original work of authorship." The creator has indeed been construed as an individual or mortal being by the US court system, and therefore, for every copyrighted material, there must be sentient input in the artistic thinking when using Machine learning and artificial intelligence. Machine learning would be utilized is viewed as an instrument for the copyright procedure.

A Copyright Agency in the United States, for instance, has stated that it intends to "register an original work of authorship, provided that the work was created by a human being." A case following this statement was, "**Feist Publications, Inc. v Rural Telephone Service Co., Inc., 499 U.S. 340 (1991)**"<sup>31</sup>. In this case, the complainant, Rural Telephone Service Company, Inc., gives telephone lines to many neighbourhoods. It was required by federal law to publicise a yearly phone book, so it authored a database with white and yellow documents. Promotions in the yellow pages make profits. Feist Publications, Inc. (Accused) is a publisher for whom the database is more comprehensive than the average database. Accused provides free distribution of telephone publications and generates income via marketing in the yellow pages. The complainant declined to give the Accused a license for the contact information in the neighbourhood, so the accused utilised them without Complainant's permission. The district filed a lawsuit for copyright violations. Information cannot be protected by copyright rules; or else, there wouldn't be any dissemination of knowledge or acquiring knowledge. Potentially exposing factual information to copyright rules would imply that anyone who used a point discovered in a memoir, whether in a campus newspaper, journal, or other novels, would've been committing copyright infringement.

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<sup>31</sup> Andres Guadamuz, 'Artificial intelligence and copyright' (WIPO, 2017)  
<[https://www.wipo.int/wipo\\_magazine/en/2017/05/article\\_0003.html](https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html)> accessed 01 January 2023

## AI & IPR IN UNITED KINGDOM

“The Copyright Designs and Patents Act of 1988” defines the rights of intellectual property of an inventor, or the man who causes content (“the CDPA”)<sup>32</sup>. If an Automation or a device generates content, the maker of the device retains the Intellectual properties so under CDPA, given that the individual is in the absolute authority of the device's operation with Artificial intelligence and machine learning. In cases in which the content is created by Artificial intelligence and machine learning and there isn't a mortal originator, the Intellectual Property Rights will be retained by the individual who develops the league strategies that enable the task (Machine learning) to be created. As a result, Artificial Intelligence is not considered an inventor in UK legislation.

In the case of, “*Thaler v Comptroller General of Patents Trade Marks And Designs, [2021] EWCA Civ 1374*”, “the England and Wales Court of Appeal (the Jurisdiction)” ruled 2-1 that an ai - based (Automation) device cannot be considered an innovator in UK patent system. “The UK Intellectual Property Office (UKIPO)” ruled in 2019 that 2 different patent claims with the Intelligence device "DABUS" as the patentee should be revoked. According to the UKIPO, the assertion of ownership type was not in accordance with “section 13(2) of the Patents Act 1977”<sup>33</sup>.

Therefore, in this particular instance, the Court determined “Section 7 of the Act” and determined that UK patent legislation provides an innovator to be an individual. Moreover, the Jury's outcome revealed that "there is no rule of law that a new intangible produced by the existing tangible property is the property of the owner of the tangible property." As a result, the Judge concluded that *Dr. Stephen Thaler*, the creator of DABUS, wasn't really authorised to pertain for the patent applications because DABUS created the innovations. Finally, the Court dismissed Thaler's plea, ruling that an Intelligent system cannot be designated as the creator of a UK invention.

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<sup>32</sup> Pratyusha Ganesh & Vishruti Chauhan, ‘Artificial Intelligence in IPR – a door to future’ (*iPleaders*, 2021) <[https://blog.iplayers.in/artificial-intelligence-ipr-door-future/#United\\_Kingdom](https://blog.iplayers.in/artificial-intelligence-ipr-door-future/#United_Kingdom)> accessed 01 January 2023

<sup>33</sup> Jennifer Davidson, ‘UK Court Of Appeal Rules AI Cannot Be Patent Inventor’ (*DWW*, 2021) <<https://www.dww.com/articles/uk-court-of-appeal-rules-ai-cannot-be-patent-inventor>> accessed 01 January 2023

## **AI & IPR IN INDIA**

Today's design approach encompasses a significant portion of technological innovation, including Artificial intelligence and machine learning. Artificial Intelligence is being used in areas other than social news and culture, such as general merchandise. From internet purchases to the utilization of web minicabs, the nation experienced speedy technological transposition. The problems in an emerging nation such as India are far more serious because the fundamental framework requires to be amended. India has very well copyright, trademark, and patent legislation.

Even so, there is currently no legal act or clause that regulates Machine learning and artificial intelligence. Current legislation need not address Machine learning and artificial intelligence and is predicated on traditional intellectual property sorts such as novels, language arts, and breakthroughs. The scope of Artificial intelligence and machine learning is so much broader and must be discussed in a unique manner than the present administration. Software applications, corporate practices, and arithmetical equations really aren't regarded as patentable innovations under the Patent Act of 1970<sup>34</sup>. The Law clearly excludes the patent holder from any other individual who wants to be sentient.

The present administration and regulations are incompatible with the forthcoming and now even extant technological complexities. In a nation with the second-highest inhabitants and the vast bulk of individuals who use the internet and internet order, it is critical that the regulations be updated to reflect the new framework. The emerging innovations provide a host of options, such as Google's Artificial intelligence-based component 'Google Cloud,' which is being utilised to create any sort of internet platform. In the event of an error caused by AI ambiguity or misinterpretation, numerous issues remain, like whom will be held accountable? Is it possible to transfer responsibility to the consumer? Moreover, any great innovation predicated on the identical automated system or notion as the piece may infringe on the privileges of the previous purchaser. It's a severe problem. On the other side, it may dissuade beginning from being

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<sup>34</sup> Pratyusha Ganesh (n 32)

creative, thereby undermining the entire point and presence of Intellectual property law in the initial spot, as well as, it may result in a sequence of court action and turmoil in the Intellectual - property industry.

The question is “*Burrow Gilles Lithographic Co. v Sarony*”<sup>35</sup> centred on whether a picture could be conferred intellectual property protection because there was a disagreement between artistic and structural labour. The judge determined that intellectual property can be allowed to a good or service that is the result of a device, which is then the outcome of an individual's formation. It also limited their security by asserting that robotic labour cannot be considered inventive. As a result, awarding copyright for products made by Artificial intelligence systems would be challenging if a stringent method such as this were implemented to people.

Also, with expanding utilisation of Artificial intelligence and machine learning in commercial and peddle concepts, in addition to protection and disbursement methodologies, this circumstance has the potential to deteriorate significantly. If there are Machine learning customers, the situation may worsen. Artificial Intelligence is built on computers and makes utilisation of information by identifying previous choices. If Artificial Intelligence becomes a customer, there is a high likelihood of brand ambiguity, which could result in extensive court action. There are currently no actual rules in any nation in this regard, and it is urgent that specific provisions be enacted to avert further ambiguity in the near future.

### **THE PATH UP FRONT (WITH RECOMMENDATIONS AND SUGGESTIONS)**

There is absolutely no reason to suspect that ai technology will improve over the period. With businesses such as Dell, Panasonic Company limited, INTC, Sun microsystems, and Amazon working to revolutionise advanced technologies associated with software delivery, refined Automation innovations are likely to boost the number of such 'inventions' that could eventuate<sup>36</sup>. Supervisors have a humongous chance to establish guidelines for assessing individual situations and providing much more adequate constitutional immunity. While it

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<sup>35</sup> Jagriti Rana (n 20)

<sup>36</sup> Swapnil Tripathi & Chandni Ghatak (n 1)

could occur to just one, as per Stephen Hawking (the theoretical physicist), there could be trouble with Artificial Intelligence subverting the significance of a human's notion and formation. A smarter move would be to bestow Artificial intelligence-based innovations and incorporate patent administrative procedures. It's because a holistic view is necessary to oversee the special rights and obligations affiliated with patents, which a device cannot entirely accomplish. Furthermore, with the increased probability of utilising numerous Automation channels that perform either with or without user intercession, patent licence exemption must be conferred to any anthropomorphic organisation that can be outlined in the incident that such technology misfires or causes a prospective contravention of legislation, resulting in personal prosecution<sup>37</sup>. It is worth noting that in order to render Property Rights reigns quite flexible to technological innovations, one might attempt to build a dipole moment by eroding the intended result of criminal procedure, which must rely on sentient facets. Furthermore, humans cannot depend entirely on AI systems, which may undermine the sentient character's stance.

## CONCLUSION

The current state of AI Technology under intellectual property law is problematic because although affirmation of Artificial intelligence-based tasks is a stride ahead, its effective implementation is the core problem. The utilization of “self-driving” cars, mechatronics, and truly automated computer systems, which also are currently being employed in various providences throughout the planet, is really only predicted to increase over the period. As a consequence, enterprises' and mortal beings' fixation on AI-powered machinery is anticipated to increase moderately. Management teams should indeed encounter the vocation of AI Technology with a consistent and equitable perspective. Despite the reality that AI-powered machinery exists all over the world, they are only recognised in a handful of countries, such as China, the United States, Japan, Great Britain, and Germany. A good potential step forward into Artificial intelligence-based consciousness could be for all national governments of international

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<sup>37</sup> Monika Shailesh, 'AI V/S IPR, Artificial Intelligence: Facets & Its Tussle With IPR' (Mondaq, October 2018) <<https://www.mondaq.com/india/new-technology/740638/artificial-intelligence-facets-its-tussle-with-ipr>> accessed 01 January 2023



monetary pathways to initiate recognising the very same, for instance, through an augmentation to Trips (Trade-Related aspects of Intellectual property Rights).

“Sophia”, an interpersonal robot called, has in recent times get to be a popular topic of discussion throughout all social networks. Sophia was created by Hanson Robotics, a Hong Kong-based company. This is the world’s largest first cyborg to be granted the right. Sophia was granted Saudi citizen status. The Artificial Intelligence powered cyborg, who once said, "It would destroy humans," heralded the dawn of a brand-new era of cyborg endemics. Civilization, as well as the rules that govern it, ought to be adequately ready to deal with such fundamental shifts. AI systems are now performing sentient operations in each of these cliques. It wouldn't be funny if they were able to accomplish work quicker than human beings and decide for themselves the next day.

The creator of an AI now possesses the privileges of its deeds. Similarly, any unlawful act will be dated directly to the development company, which might be oblivious to the Artificial Intelligence's deeds. This disparity must be stuffed in order to establish a definitive permit for Artificial intelligence and machine learning, either by annihilating it or precluding the application of the innovations that empowered its emergence. It would be a crucial component toward avoiding the sanctions of good programmers who lack control over Artificial Intelligence's acts.

As of now, living person performers are only considered Intellectual Property founders under Intellectual property legislation. Policymakers must now take into account standards and goals and obligation frameworks for Intelligence IPR. It might also be fascinating to observe how IPR transfers tasks in the Artificial intelligence-based sphere. From abbreviating our push notifications to rescuing someone's life, Artificial Intelligence alone has actually started to have a tremendous influence on our daily lives. In just about any scenario, intellectual property laws are far from cooperating with Artificial intelligence-based breakthroughs.