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THE IMPACT OF ARTIFICIAL INTELLIGENCE ON INTELLECTUAL PROPERTY RIGHTS: NAVIGATING CHALLENGES AND OPPORTUNITIES

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ABSTRACT

Artificial Intelligence (AI) is increasingly pivotal in shaping the landscape of intellectual property (IP) rights. This paper explores the multifaceted role of AI, particularly how it serves as both a facilitator and a disruptor within IP frameworks. AI technologies enhance the capability to manage and protect IP assets by improving tracking mechanisms for infringement and copyright issues, thus allowing for more efficient enforcement and compliance strategies. Additionally, AI can aid in the innovation process by providing tools for patent searches, neural patent translations, and automated identification of potential IP conflicts. However, the integration of AI into IP also raises significant challenges regarding ownership rights, originality, and the extent of protection afforded to AI-generated creations. The evolving dialogue around these issues emphasizes the urgent need for adaptive legal frameworks that can accommodate the rapid advancements in AI technology while safeguarding the rights of creators and innovators. Consequently, the implications of AI in IP rights necessitate continuous research and policy development to balance innovation with protection, ensuring that both economic growth and ethical considerations are addressed in the ongoing evolution of intellectual property law.

I. Introduction to Artificial intelligence and Intellectual Property Rights

Artificial intelligence as a technology has enormous potential and possible real-world impact. However, due to its far-reaching influence, it is also presenting a wide range of challenges. AI has given the myriad opportunities to the people. But the implementation of artificial intelligence could potentially bring about a multiple issue,

particularly in terms of its effect on labor markets and the redistribution of wealth. Furthermore, it concerns surrounding self-regulation and its potential implications, will put effect on individual's fundamental right. Hence, it becomes imperative to establish internationally agreed-upon regulations encompassing the various dimensions of artificial intelligence to mitigate the artificial intelligence negative consequences. Artificial

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intelligence could lead to the emergence of new forms of digital dependencies or even undermine the efficacy of the legal system itself.¹

In the near future, artificial intelligence will be that element which will be capable of transforming any form of a standardized and repetitive activity into a non-standardized and non-generic activity, as it will allow humans to increase their intellectual capacity and creativity. As we all know, intellectual works, and in this case more than ever, do not exist without regulations that protect them. Indeed, each activity that can be standardized and repetitive must lead to political, legislative, and jurisdictional interventions that recognize the value of intellectual works, regulate them, and protect them.

It might not be exactly endorsed by science fiction as AI, but artificial intelligence is now reality that is changing the world. There are some of the key areas for the application of artificial intelligence where it is playing a remarkable role such as Predictive healthcare: The introduction of artificial intelligence for diagnosing disease was a revolution in the healthcare sector. The idiom that it's not just a tool, it's the change agent across all fields is not an exaggeration.

Currently, doctors apply artificial intelligence to identify more cases of diseases while financial workers base their predictions upon artificial intelligence platforms. Operations such as manufacturing are getting optimized, and industries are experiencing works of art and music that are produced using artificial intelligence.

However, when artificial intelligence is integrated into numerous industries it presents more and new

problems most notably IPR related issues. The current approaches to IPR based on human-centered models and paradigms are becoming somewhat stretched. This complication of authorship and ownership arises from the capacity of artificial intelligence to come up with inventions and creative production. For instance, recent legal discussions have artificial intelligences concerns about whether or not artificial intelligence has the ability to acquire a patent or a copyright or not. An issue that challenges the contemporary understanding of people's property rights in the digital sphere. The aforementioned debates signify the importance of re-evaluation of how artificial intelligence intellectual work is being defined as well as how it is being safeguarded. When we talk about emerging markets, especially in the Indian region where there is a growing digital presence, there is a need to redesign the IPR frameworks. The country is at a tipping point between the development of its new artificial intelligence power and the old IPR laws it still has. The Indian government wants to play the role of an artificial intelligence hub and modernizing IPR laws which has become crucial in such a mission. That is why, this modernization is not only the shift to compliance with the standards of the contemporary world but also the development of a strong base for innovation. India has the opportunity to meet these challenges and target those in legislation that regulates the development of artificial intelligence and ensure that they would adequately protect creators of artificial intelligence technologies and users and artificial intelligence the country's competitiveness in the constantly evolving global

market.

II. Legal and Regulatory Environment of IPR in Today's India

India's intellectual property landscape is governed by a series of well-established laws which includes copyright laws², patents laws³, and trademarks laws⁴ designs laws⁵. These legislations were designed specifically for the human inventors and creators; with provisions for protecting artistry, inventions, brands, and designs. For instance, the Copyright Act protects the creators of original literary, artistic, and musical works. The Patents Act protects creators from new inventions, and they can get the reward of their creation for a limited time. The Trademarks Act protects brand identity while the Designs Act preserves the Executive product design from any infringement.

However, the original question from which the whole discourse originated is, what happens if the 'creator' is not a human but a creation by a machine. This is where we get the complexity of this process. The case of an artificial intelligence-generated work, whether it be an artificial intelligence done by an artificially intelligent program or a new drug developed by machine learning, fits into these laws. Whereas human involvement is significant under the current frameworks, artificial intelligence's inclusion distorts things as well as the existing legal definitions. This artificial intelligence defining to what extent a machine can be labelled an author which in turn leads to another interesting question, who owns the rights to something created by and controlled by artificial intelligence only. These are questions that India's current statutory provisions

were never intended.

The body of Indian jurisprudence has to this point supported the requirement of human participation in the arena of IPR protection. In regards to *Novartis AG v. Union of India & Others* such as.⁶ The Supreme Court in the case pointed out that patents serve only human inventors and those inventions must incorporate human creativity. In *Essar Oil Limited vs. Commissioner of Income Tax*,⁷ it was brought to attention once more that intellectual property rights belong to either natural or legal persons, but their exercise depends on the role of humans. The gaps are glaring. For example, the Copyright Act uses the term, "authorship". How does one artificial intelligence authorship in context to a piece of artificial intelligence software that produces an original novel. In addition, the Patents Act emphasizes human inventor, what happens if a machine independently comes up with an invention on its own? These laws were all-encompassing when they were enacted but they are now struggling to cope with the advancing technology. In other words, the IPR framework is in a very precarious middle ground between the legal definition and the current technological advancements. For the three categories, there are no definitive answers to questions of ownership, control, as well as protection.

India which has one of the fastest-growing IT industries stands on the precipice of a future where legal loopholes may stymie innovation. The question is not how one can slightly modify the wording of the laws but how one can reprogram the set of fundamental ideas and principles that have governed IP rights for a long time. This kind of

ambiguity regarding how existing laws apply to artificial intelligence only opens doors to confusion and legal ambiguities that may make it hard for thinkers and businessmen to navigate within this sort of ecosystem.

III. Legal Complexities in Applying Traditional IPR to artificial intelligence Innovations

With the advancement of artificial intelligence, contractors are faced with a storm of legal complexities especially as far as IPR is concerned. The question which arose here who will own the creation of any work created with the help of the artificial intelligence. Usually, authorship and ownership reflect human input and work. But when an artificial intelligence produces something, a composition or even a revolutionary invention “the question of ownership arises” And, moreover the controversies is who created the artificial intelligence of the developer. And also, who will be the consumer of the artificial intelligence software. These set of issues, and current legislation provides no solutions which create problems in protecting the IPR.

As soon as we consider the patenting of artificial intelligence-developed inventions, the problems multiply. Under current patent law, an invention must meet three criteria first, it has to be new, creative/stylish, and practical for real-life usage within an industry. But how does one attribute inventiveness when the ‘inventor’ is a machine. It is understood that with the help of artificial intelligence systems, it is possible to analyze as many variants of solutions as necessary and provide truly inventive offers within the result, though to a human it can seem that the machine has

independently thought of it, whereas it works according to its program. Further, an artificial intelligence comes up with an idea that may be described as ‘non-obvious’, or is it just the natural outflow of the logical thinking of a system that operates with data? Over this, the courts of the world have had a challenge and with this, the result has not been quite the same. For example, in the *Thaler vs. Comptroller-General of Patents, Design and Trademark*,⁸ the court of the United Kingdom ruled that Artificial intelligence cannot be recognized as an inventor. However, there artificial intelligence issues with the ownership rights of the innovations made with the help of artificial intelligence. Trademark law comes into the picture to add another dimension of confusion. artificial intelligence is today industry-utilized in the administration of brands — be it in engaging trusts with customers or producing sales-circular materials. However, what happens when an artificial intelligence negatively impacts a trademark. For instance, when an operator of an artificial intelligence system launches an application that creates an identifiable logo or slogan that is in effect a trademark, who is legally to blame. Is it the software/programme being itself or the one who developed it or the business that is using the artificial intelligence? These are rather the grey areas which imply that it can sometimes be rather challenging to identify the particular individuals or entities to hold responsible. Human intention and oversight form the basis of trademark law and artificial intelligence to account for the unintentional nature of artificial intelligence actions.

Next, there is the case of copyright and moral rights. Most copyright protects the original work of an author, but as machines compose music, write novels, or generate art, who will be the “author”. If the work is created entirely through the use of artificial intelligence, with little to no human intervention, can anyone ever in the past has created, such a work that can be protected under the copyright law. What will be the moral rights these are rights based on the author’s ownership of the creation? In such a case moral right will not be genuine especially in the markets where machines are creating art pieces. Referring to the case of *Narendra Kumar Goel vs. Union of India*,⁹ the court emphasized that copyright protection is tied to human creativity. Where an artificial intelligence-created piece of art is changed or put to use that the programmer did not anticipate or did not wish, can the programmer sue under moral rights provisions? All of these challenges underline the problem that conventional IPR models does not capture the dynamics of artificial intelligence developments as if one is trying to put a square peg into a round hole.

The legal bases, which have been effective for centuries, gradually degrade with the emergence of new technologies, and without their refinement, the system will gradually become even more and more ill-fitted to face rapidly progressing artificial intelligence.

IV. International Approaches on artificial intelligence and IPR

Since artificial intelligence in various ways is reshaping industries globally, countries are running to solve the intellectual property problems, it

generates. But here is some challenge which are still, no one has worked it out. Across the world, various jurisdictions are approaching artificial intelligence and IPR in manners that are most appropriate to their legal systems and that respond to the economic agendas they value. As we saw, starting from the USA to the European Union and China, every region is trying out frameworks, which either celebrate artificial intelligence or are trying their best to control it.

Let us begin with WIPO (World Intellectual Property Organization) which is one of the most important organizations in the global Intellectual Property system. WIPO has started the discussion and even issued some reports regarding the role of artificial intelligence in IPR but they have not come up with a standard framework yet. They agree that there is a grey area as to whether artificial intelligence is a human invention or a device created by humans, thus artificial intelligence questions regarding authorship, ownership as well as even question the presence of creativity. Nevertheless, these discussions are still quite vague and exploratory; this has illustrated how international institutions are still struggling to understand artificial intelligence as a rather double-edged weapon in the changed traditional IPR dynamics. The European Union has launched an Act relating to artificial intelligence and this is the one of the many attempts to address the artificial intelligence regulation issue across industries. However, with regard to intellectual property rights, the “European Union” is still conservative. Though they understand that artificial intelligence would revolutionize society, there is still debate on

whether pieces of art developed by intelligent machines deserve the same legal protection as the work of human beings. The EU is keen on vocalizing the need for stringent laws on the application of artificial intelligence particularly in critical uses but shies from addressing the complex issue of whether an artificial intelligence can be regarded as the ‘author’ or ‘inventor.’

However, in the United States, the stance of the US Copyright Office has been quite clear— artificial intelligence can’t own a copyright. The office made a historic decision that for something to be protected by a copyright, it has to be produced by a human. However, this artificial intelligence more questions about how to address issues of copyright infringement in works that are more supported or created with the help of artificial intelligence. Patents are another front; recent decisions made in the US courts have excluded inventors’ rights to artificial intelligence own patents, re-establishing the rule that patents must be assigned to human beings. Still, the controversy goes on as industries seek more artificial intelligence about where artificial intelligence performs as a tangible contribution maker during invention.

Then there’s China which is doing it at a pace faster than almost every other country. China has started to include changes in IPR laws conducive to artificial intelligence, because of its ambitious artificial intelligence building plan. They have recently registered multiple patents concerning artificial intelligence and searching for ways to own the things created by it.

The EU approach should be best followed by India which should implement the use of artificial

intelligence responsibly, especially in critical areas such as healthcare and defense. Looking at the example of the USA, India can with clarity offer an understanding of the artificial intelligence on human authorship, which can also take into account the developing frameworks that afford protection to artificial intelligence-artificial intelligence creations. From China, India can learn how to go further—by adjusting the laws to realities of progress in the artificial intelligence field so that their geniuses can keep on competing.

As India navigates its own artificial intelligence-IPR journey, one thing is clear: There isn’t one specific strategy to follow for arresting the decline of the native species. Instead, it is about innovation and protection, where artificial intelligence constantly redraws, lines defining the possible while justice responds equally fast.

V. Innovations in IPR for the artificial intelligence Era

As Artificial intelligence continues to artificial intelligence the ground and eclipse conventional systems, there exists the compelling necessity to reshape Intellectual Property Rights (IPR). Laws are old and not developed in a world where machines can generate ideas, inventions, and works of art then how do we protect them? And more importantly, who controls them? In response to these questions, radical transformations of the legal environment are needed. First of all, one must discuss the following points: Potential changes in legal regimes. Among the addressed reforms, the most mentioned one is the proposition to widen the definition of the term ‘authorship’ for these artificial intelligence works. Some have suggested

that the ownership be split where the parties would be the creator of the artificial intelligence and the end-user; in this way, both enjoy the fruits of the creation. For instance, in the *Thaler vs. Comptroller-General of Patents, Design and Trademark*,¹⁰ the Court of Appeal of the UK rejected Dr. Thaler's application for artificial intelligence as an inventor under the Patents Act, 1977, the Court ruled that only natural persons could be inventors, but the case uncovers the complications of artificial intelligence's role in innovative processes. Perhaps, this model could bring clear distinction when there is confusion, concerning the input that is provided by the human and the output which is generated by the machine. But that's not without some bizarre side-effects. The value of the above case is that its artificial intelligences a question, which may or may not have the potential to foster conflicts, can the current split of ownership lead to innovation in the same way, or is it a balanced solution. There's no easy answer to this.

The second proposal involves what has been termed automated IP protections. Here, it is possible to mention that artificial intelligence, being a tool, can also be used for the protection of intellectual property. Imagine this, an artificial intelligence system, that has been designed to search the entire online environment in the fight of artificial intelligences trademark or copyright violations, whenever and wherever it finds them at a pace that humans could never hope to achieve. This is not something out of a sci-fi movie, the current technology can help companies, and individuals detect infringement on a real-time

basis, to find copied logos, pirated products, or unauthorized to use of artistic and creative property. In *Capitol Records. LLC v. Re Digi Inc.*,¹¹ automated systems were used to identify and confirm copyright violations in the sale of digital music. If artificial intelligence is incorporated into the enforcement side of IPR, it will be easier to protect assets better than traditional methods since its blind spots are often missed.

However, besides propping up the current paradigm, there is a trend towards completely new types of protection of intellectual assets. Thus, the question arises as to whether artificial intelligence-produced pieces need their own category. Thus, some expert's artificial intelligence that artificial intelligence-generated content is in its legal nature different from traditional machine or human-produced works. For instance, a new category of IP, which will be referred to as 'Machine-Generated Intellectual Property' (MGIP), could afford artificial intelligence categories of protection that are singular to artificial intelligence outputs. In *Naruto vs. Slater*, the U.S. court ruled that animals are not allowed to hold copyright, underlining that authorship is currently restricted to humans only. It is something that would accept artificial intelligence in the content creation process while at the same time giving ownership rights to people managing the artificial intelligence devices or controlling their applications. In addition, what constitutes artificial intelligence could alter the way that we consider innovation. The authors of the source discussed the possibility of applying machine learning algorithms to sort through enormous patent databases disclosing numerous

opportunities to invent revolutionary products.

From being an enabler of innovation artificial intelligence is gradually turning into an actor in it. Thus, not only artificial intelligence is the topic of the IPR discourses, but also it is a driving force for boosting the possibilities of the IPR. It can be noted that the shift of IPR in the context of the artificial intelligence era does not imply the adjustment of the old laws to new conditions. It's about the creation of a flexible, innovative environment capable of predicting the changes introducing artificial intelligence into human creativity. It is even possible that resulting from this kind of discussion many new forms of sharing ownership in artificial intelligence-based systems, artificial intelligence-based enforcement tools, or even new categories of IP that have yet to be explored will be introduced; hence, the future of IP in the age of artificial intelligence requires vision and effective solutions.

VI. Policy and Regulatory framework in India

In view of the emerging technology called Artificial intelligence, India is at the crossroads of innovation. The problem is not in the development of artificial intelligence technologies but in the ability to give people a legal and regulatory perspective that could respond to artificial intelligence development rates. The current IPR laws which were adopted when human genius was reckoned to be at its peak require a complete overhaul to be able to accommodate artificial intelligence. Thus, how to wake up the slumbering giant and make it walk on the path of progression, is the question relating to India. The answer here therefore is to have strategic policy adjustments,

legal changes, and innovation and protection being in between a fine line. First of all, there's a need for policy change. Today's IP laws were not created with the presence of artificial intelligence and therefore, the first step is to redefine artificial intelligence concepts such as 'authorship' and 'inventor ship'. This issue is something that the legislators have to address. One of the potential solutions is to incorporate changes that designate artificial intelligence as a co-author, 50/50 with the developer, the user, or the company. However, in *Ferid Allani v. Union of India*,¹² the Court recognized the importance of technical advancements in artificial intelligence and software, holding that innovation should not be choked. But this artificial intelligence another question, how do you apportion IPR concerning the contribution made by a human and a machine. These are questions that India's policymakers must ask themselves to develop an appropriate matrix that can foster innovation while at the same time, attempting parity in the legal framework. Special IP courts or tribunals are the other important suggestion since artificial intelligence cases should be heard and determined by these courts or tribunals. Due to the technical specifics of artificial intelligence and several legal issues and questions related to them, the concept can outpace the traditional courts. The cases involving artificial intelligence could be dealt with within a faster time by a specialized tribunal system which will offer better-informed ruling. It would also help offload the caseload from the regular courts while providing a platform for professionals in technology, law, and ethics to collectively reason

and resolve new issues that arise with artificial intelligence. Therefore, swift dispute handling processes therein or a 'fast-track' mechanism, particularly in cases of artificial intelligence-IPR-related disputes, could cut at the very heart of artificial intelligence the competitive advantage that is increasingly being borne by India in the global race towards artificial intelligence adoption. But it is not merely a question of legal frameworks in place which in reality exist, is the problem of how to protect ideas without stifling creativity. India should bear in mind that excessive regulation may kill the growth of similar services, which it is seeking to foster. By the same token, the lack of protection of artificial intelligence-generated content or inventions might result in exploitation whereby the artificial intelligence works or inventions are not duly protected or credited. In the case of *Technip France SA v. SMS Holding Pvt. Ltd.*,¹³ the Delhi High Court weighed the need to protect inventions and innovations in an advancing technological environment. To that end, India has to tread carefully. For example, it is mandatory to introduce flexible shells providing the possibility to protect the artificial intelligence creators and users along with the further development of the technologies. Therefore, there is a need to go for a flexible policy framework of a legal nature that can grow as artificial intelligence does so that when new discoveries are developed, it does not take a very long time before the legal structures are adapted to them.

The direction of the change for India has been to include a progressive combination of protection and promotion. It is also important to protect the

innovators' rights and at the same time, foster the development of artificial intelligence. This needs some law reforms, the development of dedicated legal institutions, and the kind of approach that focuses on legal flexibility. It's a huge unmet need—but it's also a huge, expensive market with a lot of competition. If India can get this balance right it stands poised not only to take the lead in terms of artificial intelligence innovation but the lead in shaping how the legal system develops in the era of artificial intelligence.

VII. Ethical and Social Considerations

Artificial intelligence is steadily entering the process of intellectual property regulation, and in doing so becomes a complex ethical issue. As machines begin to generate content, make inventions, and potentially artificial intelligence patents, the question becomes: It's only what is artificial intelligence. What's ethical, and who decides it. It would lead to the negation of the core idea of creativity while fostering the unequal distribution of rights in the present artificial intelligence-driven reality. First, one can mention the ethical issues of artificial intelligence-created content and patents. what happens when an artificial intelligence system designs a new product or a new artwork, who should be considered as the author? Who is the one that instructed the artificial intelligence, the owner the human behind the artificial intelligence, or the physical machine? Today's systems are not well prepared to answer such questions and reference human creators instead. But that artificial intelligences concerns. Is this going to lead to someone using Artificial intelligence to mass produce inventions or other

forms of art without paying the creator or citing their invention? In addition, should the works that have been produced by artificial intelligence be patentable in the first place?

Voices are artificial intelligence that in the absence of a human component of inspiration such works ought to be public artificial intelligence. Another group feels that this approach is regressive and it is hindering artificial intelligence from realizing its full potential. Those are far from being the only ways in which artificial intelligence must change creativity itself. Creativity, once perceived as one of the most unique gifts of human beings is now replicated by machines that perform such tasks as writing music, novels, or designing products. However, one constantly poses the question of what will become of the market, when the outputs of artificial intelligence are constantly flooding the market with creations. Is it true that people's creators are replaced, or are there opportunities for collaboration between people and machines? More critically, how do we ensure that equal rights are accorded when the authorship of such work is done by an artificial intelligence system that can generate as much creative work as 'no human is capable of doing'. Unfortunately, if not properly regulated, artificial intelligence operating in the context of intellectual property can perpetuate the current dynamics where only giant organizations can protect intellectual materials with the help of the most advanced technology while indie artists struggle with that.

The problem of bias, artificial intelligence, and transparency in the development and use of artificial intelligence applications for managing IPs

also crops up. For this reason, artificial intelligence systems are designed to work with existing data, which has been compiled in the past. If that data is in some way prejudiced – by gender, ethnicity, social class, for example – then those prejudices will be mirrored in the new material it generates or in the decisions it takes over the patentability of new inventions. For instance, to what extent can an artificial intelligence system that has been initially artificial intelligence to sort inventions based on male inventors' features potentially be biased towards male-oriented inventions over inventions from other genders? Likewise, artificial intelligence-driven IP management systems require a clear disclosure of how decisions are made. In *Monsanto Technology LLC v. Nuziveedu Seeds Ltd. (2019)*,¹⁴ the Hon. Supreme Court addressed how patent regulations must adapt to rapidly changing technology so, if a machine wants to reject a patent application or alert a possible copyright infringement, there has to be sufficient logic for doing it. Otherwise, we end up with a society where an algorithm determines whether an artist's creation will be brought to the public, and there is no recourse for the artist. These are just but some of the ethical and social issues at this juncture that are very real. It is for this reason that as artificial intelligence keeps on improving there is a need to set standards that will tackle these difficulties.

So, it is key to deploy ethical norms, which focus on equality of opportunities; that will not contribute to the further exclusion of people from the creation of artificial intelligence-generated artworks. It also then means encouraging the

delivery of public reasons for the decision made by such artificial intelligence systems, communicating how such decisions were arrived at, and who is accountable should adverse outcomes be realized. Thus, by addressing the role of artificial intelligence in intellectual property, the authors pose more questions than they answer and force us to consider what it means to be creative, own something, and have an artificial intelligence share in the future when machines start creating themselves

VIII. Conclusion

Examining the essential IPR topics related to artificial intelligence shows that the current problems are not trivial adjustments to established legal structures they demand a complete overhaul. Artificial intelligence transforms the core of creation and undermines every method of ownership and idea defense in which machines can generate what humans require decades to develop. Social and legal dilemmas are deep and demand more than the remedies presented for mere symptoms.

We examined how artificial intelligence generates works and the ownership and authorship questions surrounding them. The current intellectual property framework artificial intelligence to elucidate the framework enabling machines to conceive or craft with little human involvement. To address this issue organizationally changes must be implemented to rethink inventor ship and possibly establish separate IP classifications for artificial intelligence-driven works. Additionally, we discussed creating unique courts artificial intelligence for artificial intelligence issues to

improve the clearness of judicial processes for the audience.

Therefore, artificial intelligence has emerged as a new innovative force that recreates the concept of the IPR, and new ethical questions arise concerning innovation, ownership, and artificial intelligence play. As the artificial intelligence system provide content and inventions, the existing IPR frameworks are not programmed to adapt to these changes. There is still more than wondering about the rightful ownership of the creations associated with the help of artificial intelligence – the issue is how to make the regulatory institutions clear, artificial intelligence, and non-discriminatory. The case laws that have made huge impacts include *Ferid Allani v. Union of India* and *Technip France SA v. SMS Holding Pvt. Ltd.*,¹⁵ The case studies show that all these arguments speak for the necessity to introduce the human factor in patentability criteria and the need to artificial intelligence artificial intelligence the optimal balance between profitable technological advance and ethical non-violation of human rights. Consequently, laws and regulations do not matter in this discussion; appropriateness holds greater significance. A heightened degree of protection for artificial intelligence might limit the room for progress in the industry because the technology may retreat into old thinking instead of adaptively seeking fresh ideas. Should creativity fall below this amount the IP sector is detrimental to innovators human and machine who cannot achieve the highest rewards from their creations. Concerns about impartiality and clarity are serious and persistently significant as artificial intelligence

systems hold onto IP resources or produce original concepts all on their own. To navigate these challenges effectively, several key recommendations should be implemented like redefine authorship and inventor ship. The policymakers must thus expand the concept of authorship and or inventors to incorporate artificial intelligence and its rightful portion of the ownership rights and liabilities. By establish specialized IP courts, the formation of specialized courts to address issues involving artificial intelligence in Intellectual Property helps in arriving at a resolution more quickly and gives legal practitioners legal and technical as well as ethical skills. By implement ethical standards, the enhanced awareness of the existence of various arbitrariness inherent in artificial intelligence and the growing concern for their implications should facilitate the establishment of a sound ethical concept that would make it possible to reduce the role of biases as much as possible. This framework should have an effect of increasing responsibility in decision-making processes regarding IPR. Government can encourage collaborative Innovation, ensuring that human and artificial intelligence systems are allowed, encouraged, and rewarded to work together will encourage the creation of excellent works while safeguarding the rights of such creators. Government can on regular basis update Legal Frameworks, because artificial intelligence is constantly developing, the legal rights that address it should also change. Currently, there is a need to create a flexible and shifting legal regulation, because the simple occurrence of new challenges requires prompt and adequate solutions.

If implemented these recommendations will enable best-practice artificial intelligence adoption in India while making enough room to protect and incentivize creativity, ownership, and artificial intelligence in the country's IP discourse. Finally, IPR in an artificial intelligence-controlled world will also depend on the potential of the future to change, as well as the protection of all the involved parties. Ultimately it requires creating systems that make sure innovation and defense benefit the public. Protecting intellectual property isn't just the objective, it also demands developing a system that promotes technology development alongside upholding justice among humans and machines. With artificial intelligence present in society's landscape the nation must respond, to do so appropriately it could either elevate India to artificial intelligence leadership or assign it oversight of Intellectual Property Rights on an international scale.

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⁶ *Novartis AG v. Union of India & Others*, (2013) 6 SCC 1.

⁷ *Essar Oil Limited vs. Commissioner of Income Tax*, (2016) 10 SCC 1

⁸ *Thaler v. Comptroller General of Patents, Designs, and Trademarks* [2021] EWCA Civ 1374

⁹ *Narendra Kumar & Ors. v. Union of India & Ors.* AIR 1960 SC 430

¹⁰ *Thaler v. Comptroller General of Patents, Designs, and Trademarks* [2021] EWCA Civ 1374

¹¹ *Capitol Records.LLC v. ReDigi Inc.*, No. 16-2321 (2nd Cir. Dec. 12, 2018), available at: <https://www.copyright.gov/fair-use/summaries/capitol-records-llc-redigi-inc-no.16-2321-2nd-cir.dec.12.2018.pdf>

¹² *Ferid Allani v. Union of India*, W.P.(C) 7/2014 & CM APPL. 40736/2019

¹³ *Technip France SA v. SMS Holding Pvt. Ltd.*, available at: <https://indiankanoon.org/doc/1719469/>

¹⁴ *Monsanto Technology LLC v. Nuziveedu Seeds Ltd.* (2019)

¹⁵ *Ferid Allani v. Union of India and Technip France SA v. SMS Holding Pvt. Ltd.*, W.P.(C) 7/2014 & CM APPL. 40736/2019
