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## **IMPACT OF AI ON IP REGULATIONS**

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### **ABSTRACT**

Artificial Intelligence (AI) is revolutionizing various sectors, including the field of Intellectual Property (IP) law. This report explores the significant impact AI has on IP law, focusing on the challenges and opportunities it presents. The purpose of this report is to provide a comprehensive analysis of how AI intersects with patent, copyright, trademark, and trade secret laws, and to propose recommendations for future legal and policy frameworks.

AI refers to the simulation of human intelligence processes by machines, especially computer systems. These processes include learning, reasoning, and self-correction. Intellectual Property law, which includes patents, copyrights, trademarks, and trade secrets, aims to protect creations of the mind and ensure creators can benefit from their work. This section sets the stage by defining key concepts and providing historical context for the evolution of AI and IP laws.

## **OBJECTIVE OF INTERNSHIP**

### 1. Practical Legal Experience

- Assist in drafting, reviewing, and editing legal documents such as contracts, agreements, and policies.
- Conduct legal research on various corporate law topics and summarize findings. - Participate in meetings, negotiations, and consultations with internal and external clients.
- Observe and assist in litigation processes, if applicable.

### 2. Skill Development

- Learn and apply legal research tools and databases such as Westlaw, LexisNexis, or Bloomberg Law.
- Develop proficiency in legal writing, including memos, briefs, and reports.
- Improve oral communication skills through presentations and participation in meetings.

### 3. Professional Networking

- Attend networking events, workshops, and seminars related to corporate law.
- Engage with mentors and seek feedback on performance and career advice.
- Build relationships with colleagues, supervisors, and other interns.

### 4. Understanding Corporate Environment

- Gain knowledge of the company's business operations and how the legal department supports functions.
- Understand compliance and regulatory issues relevant to the company's industry.
- Learn about risk management and how legal strategies are developed to mitigate risks.

## 5. Personal Development

- Set personal milestones for the internship period and track progress.
- Reflect on experiences and identify strengths and areas for improvement.
- Develop time management and organizational skills through handling multiple tasks and deadlines.

## **SCOPE OF THE SUBJECT**

### Scope of the Topic: "The Impact of Artificial Intelligence on Intellectual Property Law"

The scope of this topic encompasses a comprehensive analysis of how Artificial Intelligence (AI) is influencing various aspects of Intellectual Property (IP) law, with a focus on patents, copyrights, trademarks, and trade secrets. This includes:

1. **Legal Framework Analysis:** Examination of existing IP laws and how they are being challenged or interpreted in light of AI developments. The scope includes a detailed review of patent laws related to inventorship, copyright laws concerning authorship and originality, trademark laws in brand management, and trade secret protection in the context of AI.
2. **Case Studies and Legal Precedents:** Analysis of key legal cases where AI has played a central role in IP disputes. The scope includes exploring landmark cases that have set precedents, as well as ongoing legal debates that are shaping the future of IP law.
3. **Comparative Jurisdictional Study:** A comparative analysis of how different jurisdictions (e.g., United States, European Union, China) are addressing the intersection of AI and IP law. This involves exploring varying approaches, regulatory responses, and the potential for international harmonization of IP laws concerning AI.
4. **Policy and Ethical Considerations:** Evaluation of the ethical implications and public policy challenges posed by AI-generated intellectual property. The scope includes recommendations for policy reforms, balancing innovation with the protection of creators' rights, and addressing broader societal impacts.

5. Future Trends and Recommendations: Identifying emerging trends in AI and their potential impact on IP law, with a focus on future challenges and opportunities. The scope includes proposing legal and policy recommendations to adapt IP law frameworks to effectively integrate AI, ensuring that they remain relevant and capable of addressing the unique issues AI presents.

This topic's scope is broad yet focused, providing a holistic understanding of the impact of AI on IP law and offering insights into the necessary adaptations to legal frameworks to keep pace with technological advancements.

## **RESEARCH METHODOLOGY**

Methodology for "The Impact of Artificial Intelligence on Intellectual Property Law"

### **1. Research Design**

The methodology for this report is structured to provide a comprehensive analysis of the intersection between Artificial

Intelligence (AI) and Intellectual Property (IP) law. The research design includes a combination of qualitative and quantitative methods to ensure a thorough exploration of the topic.

### **2. Literature Review Objective:**

To gather existing knowledge and theories on AI and IP law.

Sources: Academic journals, legal textbooks, case law, government reports, and reputable online databases such as LexisNexis, Westlaw, and Google Scholar.

Process: Systematic review of literature focusing on key themes such as AI-generated inventions, copyright issues, trademark enforcement, trade secret protection, and policy developments.

### **3. Case Study Analysis ®.**

Objective: To provide practical insights and real-world examples of AI's impact on IP law.

Selection Criteria: Cases selected based on relevance, significance, and availability of detailed information. Notable cases include DABUS for patents, AI-generated music and art for copyrights, and AI-driven trademark applications.

Analysis Framework: Detailed examination of each case, including background, legal arguments, court decisions, and implications for future AI law.

## **INTRODUCTION**

AI has the undeniable ability to completely transform conventional ways and practices in a variety of industries. Intellectual property (IP) law is one area where AI is causing revolutionary waves to ripple through. AI is drastically changing the field of IP law by making patent searches and infringement detection far more efficient than they have ever been.

### **The Intersection of AI and Intellectual Property**

Essentially, artificial intelligence is a collection of technologies that can carry out operations that normally call for human intelligence. In order for computers to learn from enormous volumes of data and make wise decisions, machine learning and deep learning are essential subsets of artificial intelligence. These AI innovations are beginning to have a significant impact on the IP industry.

AI and IP interact in amazing ways. It is able to both create intellectual property and act as a protector of intellectual property rights.

For example, machine learning algorithms may produce novel outcomes and inventions that are claimable as patent rights. At the same time, these algorithms can be used for the purpose of locating potential breaches of licenses, and counterfeit products.

### **AI's Role in Patent Searches and Management**

Historically a laborious menial task that is subject to human error, AI is changing the game of patent searches. Thanks to their intuitive interface and smart algorithms, AI-powered platforms can analyze massive patent databases quickly and accurately.

- Ideal teachers as per the defined parameters: With the use of AI-driven platforms, the

searches get more accurate and are done in an advanced way, reducing the time and human effort. A provision of a platform might be to look for patents filed in a certain year and set of claims in a certain technology domain.

- Predictive analysis for potential patent infringements: AI can also proactively help many businesses avoid unknowingly infringing a patent by predicting any potential future issues and enabling them to take action ahead of time. This helps AI in predicting where there may be conflict before it results in a legal battle by scrutinizing a company's portfolio and matching it with new patents filing.
- A detailed study of patent validity: Companies own a detailed patent validity exam through AI. Every patent claim can be examined by the system and checked against prior art, in this way, determining the truth of a patent.

Moreover, AI has an impact on patent administration. AI elevates patent administration to a new level through the upkeep of extensive patent databases, the tracking of patent lifecycles, and even the recommendation of proctor actions based on historical data.

### **AI and IP Infringement Detection**

This industry also benefits from AI technology's alertness in identifying intellectual property infringement. There are several ways that AI can be used to safeguard IP rights:

- Businesses can actively search the market for fake goods: Artificial intelligence (AI) systems are able to search the internet for imitation or counterfeit goods and alert businesses to any intellectual property violations. The revenue and reputation of a corporation are safeguarded by this proactive detection.
- Creators and artists are able to recognize unauthorized usage of their protected work: AI is able to identify instances of unlawful usage of protected content, such as images, films, and music, by using pattern recognition. This grants authors and artists the authority to defend their creations and seek redress for copyright violations.
- Patent holders can save important resources by identifying possible infringements early: Through routinely searching patent databases and contrasting

Image recognition algorithms are one example of this in action; they may search the internet for pictures that break copyright restrictions and notify the owner of the intellectual property of any possible infringement.

### **AI's Influence on Generating Inventions**

Using machine learning and predictive modeling, AI is able to recognize patterns and solutions that are unseen to the human sight. It is capable of independently creating original algorithms, physical creations, and processes. This poses interesting queries concerning the nature of ownership and inventorship.

### **The Challenges and Opportunities AI Presents for Patents Attorneys**

The transformational potential of AI presents both possibilities and challenges for patent attorneys. These are a few of the main obstacles:

- Deciding the patentability of AI-generated inventions: In IP law, the basic question of whether inventions created by AI can be patented is still unclear. To solve this challenge, patent attorneys must wrestle with legal complexity and interpret current legislation..
- Potential displacement due to automation: There is concern that AI may take over some of the jobs that patent attorneys have historically performed, especially those involving document evaluation and patent searches. To remain valuable in the AI-driven world, attorneys must refocus their duties and competencies.
- Ethical consideration in AI-enabled decision-making: Ethical issues become increasingly pressing as AI becomes more involved in decision-making. Lawyers must be aware of AI's limitations and make sure that using it won't go against ethical standards both in law and in their profession.

Conversely, artificial intelligence has bright prospects for patent attorneys. AI frees up lawyers' time to concentrate on more strategic facets of their business by automating repetitive duties. Attorneys can provide more proactive and effective client advice thanks to AI's predictive powers. In the hands of progressive patent ethics, artificial intelligence may prove to be a valuable instrument rather than a danger.

## **Preparing for the Future of AI in IP Law**

Patent attorneys and firms need to implement new rules and tactics in order to properly traverse the AI revolution. They ought to make an investment in studying and comprehending AI technologies and how IP law is affected by them. Furthermore, they ought to actively influence upcoming regulations and remain current on regulatory advancements in this field.

It's evident that AI offers an exciting new horizon as we stand at the nexus of IP law and AI. It has the potential to completely transform IP law, presenting both opportunities and difficulties for patent attorneys. Patent attorneys can succeed in this fascinating new field by accepting AI, comprehending its consequences, and planning forward.

## **IMPACT OF AI ON INTELLECTUAL PROPERTY PRACTICES**

### **Introduction**

Professor John McCarthy, an American computer scientist, coined the term artificial intelligence (AI) in 1956 and defined it as "the science and engineering of making intelligent." With its many technical uses, artificial intelligence (AI) has emerged as a highly significant technology in today's society. It has been used almost everywhere in the world, automating most tasks and reducing the amount of human intervention required to ensure accuracy and prevent mistakes. The significance of AI to creativity and innovation has received acknowledgment on a global scale. Its application in a variety of disciplines, such as education, science and medical, entertainment, transportation, and industry, has altered our daily life. The distinction between humans and robots is getting harder to make as computers develop capabilities comparable to human ones.

Innovation in legal technology has created new opportunities for lawyers to focus on more strategic work and boost productivity. The fast expansion of the field of intellectual property (IP) has brought with it both new opportunities and challenges. The current state of AI and intellectual property has resulted in new works due to various adjustments and emerging trends. New business models, the emergence of digital technology, and the increasing importance of intangible assets have all put pressure on established notions of intellectual property protection. It is the reason why a review of the existing intellectual property systems is required.



Trade secrets, designs, patents, trademarks, copyright, and other types of intellectual property rights are all significantly impacted by artificial intelligence. Artificial intelligence (AI) is used to perform tasks that were previously performed by humans, such as large-scale data processing, legal research, and document and contract evaluation. Despite the many advantages of AI in the field of intellectual property (IP), there are still some difficulties that cannot be disregarded, including authorship and ownership of the created works as well as the consequences for copyright, trademark, trade secret, and patent laws. Examining how artificial intelligence (AI) impacts intellectual property rights and the challenges it presents for their protection is the major objective of this essay.

### **Impact of AI on IP Laws**

The application of artificial intelligence has had a profound impact on how people behave. Its application to intellectual property has become more and more prevalent in a manner similar to this. Since AI can generate original content, one of the most important applications of AI in IP is the creation of new work. AI is the application of intelligence techniques such as machine learning, linguistic intelligence, perception, and reasoning to tasks. With the use of AI-powered algorithms, thorough searches of current IP databases may be completed more rapidly and accurately. It also helps in the examination of technical data and documents to find relevant works that already exist in order to prevent copyright infringement. It is anticipated that the use of AI technology would grow in industries related to intellectual property. This can give rise to fresh legal challenges and dilemmas.

### **Ownership and Authorship**

When it comes to intellectual property, the ownership and authorship of works produced by artificial intelligence pose serious legal challenges. Artificial intelligence (AI), as was previously said, is capable of producing extremely creative, unique work. However, the question of "Who owns that work?" arises. The person giving the AI system instructions to generate the work, the AI system's developer, or the AI system itself (User). AI-generated art deviates from the conventional understanding of intellectual property law, which maintains that the work's creator or author is its unique proprietor.

## **Copyright Challenges**

Copyright issues are raised by artificial intelligence's ability to create large amounts of content quickly. This is because the technology can simply copy and reproduce copyrighted property, such as images, texts, movies, music, and other media. The capacity of artificial intelligence (AI)-driven systems to imitate any type of information or artwork without the owner's permission makes it difficult to discern between authorized and unapproved creations. It now becomes a matter of whether copyright may be applied to works created by AI. Most countries, including Spain and Germany, have determined that copyright protection is limited to works created by humans. In a same vein, the Delhi High Court determined in the M/S Kibow case that artificial intelligence systems cannot be legally acknowledged as the owners of a trademark. It further underlined how the Trade Marks Act of 1999 is proof that only private persons are qualified to file applications and get official registration as trademark owners.

Other challenges faced by AI in protecting intellectual rights include deepfakes, altered content, automated content creation, and data privacy and security. Furthermore, the use of AI raises a number of ethical issues; as a result, it is necessary to introduce suitable frameworks that strike a balance between the advantages of AI and the defense of intellectual property rights.

Particularly in the area of intellectual property laws, artificial intelligence has significantly advanced the legal field. It also brought with it a number of new difficulties, including copyright and ownership. It is essential to manage the concerns and make sure that IPRs are preserved as AI develops further. The Doctrine of Fair Use or Fair Dealing provides AI with a protective shield by allowing restricted uses that preserve the originality and proprietary nature of any work covered by copyright law under the Act.

The integration of artificial intelligence (AI) into various facets of society is one of the most fascinating and quickly developing disciplines in the world of technical growth. AI systems are finding use in a variety of industries, including healthcare, banking, transportation, and entertainment, as they get more complex. But as AI technology continues to seep into various areas of human endeavor, it also brings with it a plethora of legal ramifications and difficulties that call for cautious thought and regulation. Investigating the legal foundations, ethical considerations, and new difficulties in this dynamic field is crucial when examining the

complicated interaction between law and AI.

Artificial intelligence (AI) is becoming more and more integrated into different aspects of life in an era of fast technological growth. Among the various fields that artificial intelligence has affected, law is one that is particularly affected by the technology's potential and in a unique position to direct its advancement. Global legal systems face a variety of opportunities and challenges as artificial intelligence develops.

Artificial Intelligence (AI) has quickly emerged as a disruptive force in a number of areas, including healthcare and finance. But nowhere is its influence arguably more extensive and varied than in the legal field. AI technologies offer the legal profession and society at large both previously unheard of potential and difficult obstacles as they develop.

### **AI Legal Frameworks**

There has been a consistent rise in the application of AI in the legal industry due to the need for efficiency, cost-effectiveness, and accuracy. Legal professionals are using AI-powered solutions for a variety of purposes, including predictive analytics, legal research, contract evaluation, and document automation. These technological advancements are expected to enhance decision-making, accelerate processes, and broaden access to justice.

The integration of artificial intelligence technologies poses significant challenges to the existing legal frameworks. Traditional policies frequently lag behind the rapid advancement of AI, leading to uncertainty and confusion over liability accountability and ethical standards. Because of this, lawmakers throughout the world are having trouble drafting comprehensive laws that would regulate the use of AI.

In response to these concerns, several countries have passed laws or policies that are especially focused on artificial intelligence. For instance, the European Union's General Data Protection Regulation (GDPR) contains provisions relevant to the AI era. Parallel to this, countries like the US and Canada are looking into legislative frameworks to address concerns about accountability, transparency, and bias in AI.

New legal issues that push the limits of current legal systems continue to arise as AI technology develops. The attribution of culpability in situations where AI-generated results are involved

is one such problem.

Another new legal concern pertaining to AI-generated material and intellectual property rights. Copyright ownership and authorship issues surface as AI algorithms produce creative works like music, literature, and artwork. Because human creators are primarily ascribed with authorship under current copyright laws, it is unclear what status AI-generated works and the rights associated with them have.

The rapid development of artificial intelligence technology has outpaced the establishment of comprehensive regulatory frameworks, making it difficult for lawmakers to effectively regulate its use in the legal domain. Legal problems are important when it comes to matters like intellectual property rights, data privacy, and liability for AI errors.

Furthermore, new legal issues are raised by the interaction of AI with established legal ideas like accountability and culpability.

When an AI system errs in a legal situation, who is accountable?

How can we create precise guidelines for the moral development and application of AI in the legal system?

These queries highlight the necessity of preventative regulations as well as cross-disciplinary cooperation between technologists, ethicists, and legal professionals.

The future is extremely promising, despite the difficulties and uncertainties associated with integrating AI into the legal profession. Artificial Intelligence (AI) has promise in democratizing access to legal services, bridging the knowledge gap between the general public and legal experts, and improving the efficacy and efficiency of legal procedures.

To fully realize this potential, though, legal consideration of the ethical, societal, and regulatory ramifications of AI is necessary. To ensure that AI advances justice and protects the rule of law, stakeholders must cooperate to create strong frameworks for its ethical and responsible usage.

## **Challenges**

Beyond just adhering to the law, AI's ethical implications have a significant impact on society. Issues of justice, transparency, and bias become more significant as AI systems get more independent and capable of making decisions that affect people's lives. AI algorithms, for instance, may unintentionally reinforce systemic biases seen in historical data when they are utilized in loan approval or recruitment procedures, producing discriminating results.

It takes a multidisciplinary strategy with stakeholders from computer science, ethics, law, and sociology to address these ethical issues. Developers, legislators, and organizations can navigate the ethical complexities of AI deployment responsibly with the help of ethical guidelines like the IEEE Ethically Aligned Design and the Asilomar AI principles.

However, incorporating AI into the legal sector is not without its challenges and ethical quandaries. One of the primary reasons for worry is the potential for prejudice in AI algorithms, since it could exacerbate current injustices in the legal system. Due to biased datasets or algorithms, AI systems may inadvertently produce unfair results by favoring certain groups over others.

The opacity of many AI systems seriously impedes accountability and transparency in the legal system. Whereas reasoning and logic can be articulated in human decision-making, artificial intelligence (AI) algorithms sometimes operate as "black boxes," making it difficult to understand how they arrive at particular conclusions. This lack of transparency raises questions about due process and the ability to challenge or appeal AI system decisions.

The rapid advancement of AI technology presents challenges for legal frameworks and regulations as well, as they may find it challenging to adapt to the ever-changing environment. Liability, accountability, and data privacy are just a few of the unsolved uncertainties surrounding AI-generated decisions, which forces lawmakers and legal professionals to grapple with challenging issues at the intersection of law and technology.

Even with its potential advantages, integrating AI into the judicial system presents serious difficulties and moral dilemmas. The possibility of bias in AI algorithms is a serious worry since it has the ability to reinforce and magnify already-existing inequities in the judicial system. Unfair results from biased algorithms can exacerbate problems with race, gender, and

socioeconomic position. Legislators and legal professionals continue to have serious concerns about ensuring accountability and fairness in AI-powered decision-making.

Artificial intelligence-generated legal advice and rulings have complicated and wide-ranging ethical ramifications. It is important to carefully consider issues related to accountability, transparency, and the transfer of decision-making power to computers. Concerns over the loss of knowledge and the deterioration of human judgment become more pressing as AI systems grow more independent.

Despite the potential benefits, there are challenges associated with using AI in law. One of the primary problems with AI algorithms is their lack of interpretability and openness. Legal decisions frequently have far-reaching effects, and relying too much on opaque algorithms compromises accountability and due process.

Prejudice in AI systems also raises concerns. These biases could unwittingly support the persistence of gender or racial inequality that already exists in the legal system. When tackling bias in AI, careful consideration of data selection, algorithm design, and ongoing monitoring to minimize unintended consequences are required.

Another challenge is how AI is affecting the legal profession specifically. Artificial intelligence (AI) has raised concerns that lawyers could lose their careers as a result of it, particularly in positions like document review that are frequently occupied by young associates. Supporters argue that rather than replacing human expertise, AI may enhance it, allowing legal professionals to focus on highvalue jobs that need careful planning and complex reasoning.

AI's ethical ramifications for the legal system are intricate and varied. Principles like competence, secrecy, and fervent advocacy are highlighted by legal ethics regulations and must be respected in the context of AI use. It is the duty of legal professionals to guarantee that AI systems are applied morally and in accordance with the law and professional norms.

More universal ethical issues like justice, autonomy, and privacy are raised by the use of AI. For example, if massive amounts of personal data are collected and processed for AI-driven decisionmaking, privacy rights can be called into question. AI systems need to be accountable and transparent if the public is to maintain its trust in the legal system.

## **Definitions and Concepts**

In the year 2023, artificial intelligence and machine learning technologies have advanced to an astounding and even frightening degree. AI-powered instruments that do jobs in a matter of seconds are no longer the stuff of science fiction thrillers; instead, they coexist with people and are employed by professionals from a wide range of industries. Experts in the fields of IT, law, healthcare, and other fields are concerned that AI may eventually replace them in their employment; this is already the case in the legal sector.

It seemed as though tradition had been rocked to its core when DoNotPay, a legal startup, sent an AI-powered robot to court to defend a client. Does this imply that ChatGPT will write cases, all lawyers will be AI-powered robots, and legal businesses will only use AI going forward? That is partially accurate. AI is transforming the legal sector by assisting professionals with repetitive duties, assisting with data investigation, calculation, and processing, and enhancing decision-making more quickly than you can say "order in the court!"

Being in the business for more than 16 years has given IntelliSoft the opportunity to truly foresee the future of artificial intelligence in the legal sector. We're not simply hopping on the AI bandwagon; rather, we're taking the wheel with assurance. We are eager to impart to you our understanding of artificial intelligence (AI) in the legal sector, having recognized its significance and the primary means of achieving so. Let's get right in to the legal industry's usage of AI and help you find the answer to the question of how law firms can employ AI.

### **What Is Artificial Intelligence?**

AI is defined in a variety of ways depending on the tasks it completes. Given that AI leverages computing power to carry out tasks that people typically undertake, it is also frequently referred to as cognitive computing or machine learning. Artificial intelligence (AI) uses data perception and synthesis to replicate human thought processes, automate tasks, and make judgments.

### **There are five components of AI:**

How is artificial intelligence used these days? Artificial Intelligence is meant to think and act like humans, but a hundred times faster and more effectively. It powers the algorithms used by streaming playlist curators, driverless cars, and virtual personal assistants.

Have you ever observed that your smartphone can always recognize your face, regardless of whether you have new hair, are wearing glasses, or are just waking up? AI algorithms that match and assess features to provide a smooth and secure user experience are what enable all of that.

Artificial Intelligence is often accompanied by natural language processing, machine learning, and robotics, but what are these terms? Are they entirely distinct from AI, or are they the same?

AI includes machine learning as a subset. Here's where people teach computers to learn on their own by entering data. Machine learning technologies analyze data for patterns, make inferences, and continuously learn from their experiences.

AI also includes natural language processing (NLP), which facilitates human-machine communication. It makes it possible for computers to comprehend and read handwriting, speech, and text. Put otherwise, this is the part of text processing where computers behave like people. But unlike humans, NLP algorithms can swiftly scan massive volumes of data, spotting patterns and emphasizing the most important details.

Robots are the focus of robotics. It's a field of study in computer science and engineering that builds robots—machines that can carry out different tasks—instead of people.

Artificial Intelligence has the potential to revolutionize almost every business. Is artificial intelligence used in law enforcement? In fact, legal professionals are using AI to search through massive case and document libraries, obtain crucial information, and help lawyers build their cases. We'll cover a lot more applications of AI in the legal industry in this article. Professionals in a variety of professions will have many options in the bright future of technology.

### **Benefits of Artificial Intelligence in Law**

Artificial intelligence has shown to be a game-changer for law firms seeking to boost efficiency, make better decisions, and become more competitive. It makes sense that a large number of legal professionals use AI to assist lawyers in their companies. Continue reading if you're thinking about using AI in the law industry. The following are the primary advantages of AI use in the legal sector:



## **Increased productivity**

Artificial intelligence (AI) techniques are used by lawyers to automate repetitive operations that typically require a lot of time and effort. Spending more time with clients and concentrating on core business operations is achievable when artificial intelligence algorithms are tasked with these duties.

Artificial intelligence (AI) is capable of performing manual tasks, such as searching for a specific case, locating a contract, creating invoices, and performing due diligence, far more quickly than a human can. This lowers the possibility of human error. AI for lawyers so boosts their output and efficiency, allowing them to do more tasks in less time.. Improved access to justice

Legal assistance can be costly, and not everyone can afford it. AI assists in resolving this problem and increases accessibility to legal services. How does something like this occur? Professionals can by employing AI and ML to save their clients time on repeated processes, businesses can reduce costs for their clients. For this reason, you should consider using artificial intelligence for attorneys.

Without the usage of AI, for example, research can take more than a day and incur very high costs. With AI technology, the same research could take two or three minutes. Furthermore, the more routine tasks AI performs, the more clients attorneys may assist. That is the perfect combination of law and artificial intelligence.

An improved experience that is more client-centered

As previously mentioned, artificial intelligence in the legal sector frees up a lot of time for lawyers and other legal professionals, allowing them to spend more time with their clients and develop more meaningful, in-depth connections.

Apart from helping clients with their problems, lawyers also need to establish a rapport with them, take the time to get to know them, and employ a unique approach to truly understand what each client is going through. Thank goodness, legal assistance artificial intelligence helps with this by saving lawyers' time.

- **Relevant Readings:**

- Opening eDiscovery: The Ultimate Guide to eDiscovery Tools
- Management of Legal Knowledge App Development: The Reasons, Features, and Examples Why Your Law Firm Needs a Mobile App

### **How Can AI Help Attorneys in Law Firms?**

According to current predictions, the legal profession is predicted to deploy artificial intelligence (AI) to the tune of \$0.94 billion in 2023 and \$3.29 billion by 2029. It's currently assisting attorneys in carrying out their duties more effectively, and when more businesses see how advantageous AI and law are through the actions of their rivals, they will begin to use AI technology as well.

Let's examine the effects of artificial intelligence on law businesses by looking at some strategies that attorneys might implement to maximize productivity and provide better client-focused services.

#### **E-Discovery**

E-discovery is one way that artificial intelligence is used by attorneys. In the legal field, electronic discovery refers to the procedure of gathering, preserving, analyzing, and sharing data pertaining to a particular case using electronic means rather than retaining it all on paper.

It can be difficult to find essential details and information when all case records are kept on paper. Attorneys may have to spend a great deal of time searching through mountains of paperwork that is frequently scattered about in order to uncover a single, important detail. To be honest, if time is the deciding issue in a case, it's not a viable or efficient solution.

Lawyers may quickly locate any material they require and receive prompt responses when using AI-driven e-discovery technologies. Furthermore, while using AI-driven tools to search for data, the legal sector can make use of filters and certain parameters like dates or geographic areas. legal investigation

Another application of AI in the legal industry is legal research. While legal research is still necessary, artificial intelligence can make the process much simpler. Using AI legal research tools, attorneys can search and browse databases that contain statutes, rules, jurisdictions, case

laws, and more.

Again, all of this can be done in a few seconds online, so there's no need to read hard copy versions of these forms.

By using more thorough and detailed research, which enhances case knowledge and expedites the research process, clients can save money with AI for attorneys.

### **Document management and automation**

Document management is another instance of how AI is being used in legal practice. It's common for many sectors to move away from paper documentation, but does it mean electronic storage is perfect and problem-free? Regretfully, there are drawbacks to electronic documents as well, particularly in terms of organizing and locating pertinent data.

Law companies utilize AI law algorithms to handle their electronic records more effectively because of this. It expedites the search process and aids attorneys in organizing and storing documents like as contracts, cases, emails, and notes. Massive volumes of data can be quickly analyzed by AI to locate what you need.

Additionally, the documents are safely kept because accessing and searching for them requires a valid ID, which is verified by the software. It so aids in preserving control and security over the documentation. If you need to share the files, you can link the program with Microsoft Office or other comparable AI-powered legal applications.

When it comes to managing documents, automation is also essential. Lawyers can save a significant amount of time by automating the creation of case records through the use of templates created by AI-powered software. Instead of starting from scratch, all they have to do is fill in the blanks. This holds true for pleadings, bills, agreements, motions, and invoices. Due diligence

One of the biggest problems facing law firms is the large number of contracts that lawyers must analyze throughout the due diligence process. This procedure takes a lot of time. AI-powered due diligence solutions can help law firms expedite and improve the efficiency of the process. These AI-powered solutions help lawyers locate and obtain the papers they require for due

diligence and also identify any modifications or problems in those documents. Litigation analysis

Lawyers must conduct a detailed analysis of prior precedent-setting cases in order to assess the likelihood of a case's victory or estimate its financial implications. Legal practitioners can create documents that are more exact and in line with the data-driven insights obtained from the analysis by using AI for lawyers to quickly assess these precedents. Concerns regarding AI

Naturally, you may be concerned about the application of AI in your legal practice; after all, can you really trust a machine to make judgment calls and carry out duties that should only be done by humans? AI is not a magic bullet; it cannot handle every issue you have or manage your legal practice. Let's equip you with all the tools you need to handle any potential problems that may arise when using AI.

### **Violation of privacy laws**

Most likely, you've watched films in which artificial intelligence (AI) devices gather data on people and subsequently utilize it against them. Regretfully, it's not quite a storybook ending. AI-powered products have the potential to make bad decisions by using personal information for automated decision-making.

Law firms are required by the EU General Data Protection Regulation (GDPR) to take particular steps to guarantee that data is processed appropriately and shielded from being used for new purposes. One advantage of AI in law is that data protection must be ensured in advance because it is impossible to forecast with certainty what applications AI algorithms will find applications for, let alone how they will learn.

### **Ethical considerations**

Since computers are human-filled blank slates that have been filled with knowledge, they are morally and ethically neutral by default and can therefore operate in society in accordance with human values. Because AI frequently analyzes historical data, biases related to gender or race may be present in the data, and the system may pick up on and reinforce those biases. Intellectual Property (IP)

Sadly, no copyright legislation can protect any work produced by AI algorithms, which raises the question of intellectual property. Let us envision a scenario in which your artificial intelligence software produces novel data that is deemed innovative.

Which person owns this invention, you or your AI program? Is it possible for anyone to own any rights to the output? Since AI technologies might lead to legal problems, it is imperative to make sure they do not extract data from publicly accessible sources.

### **What are AI's benefits and drawbacks for the legal profession?**

#### **Benefits of AI for Legal Practice:**

- Efficiency and time savings. Artificial intelligence (AI) assists legal practitioners by automating time-consuming and repetitive tasks like document review and legal research, freeing them up to focus on more strategic duties.
- enhanced legal research. Artificial intelligence (AI)-powered systems can quickly assess legal information and help lawyers locate pertinent cases, statutes, and precedents in comparison to traditional research approaches.
- Improved Assessment of Documents. By scanning and evaluating a vast number of documents for relevant information and possible threats, artificial intelligence (AI) can minimize the time and human labor required for document review procedures.
- Analytics that predict. Artificial intelligence (AI) systems are able to examine trends in legal data to offer insights into case results, assisting attorneys and other legal professionals in making better decisions and forecasts regarding the likelihood of success for their legal tactics.
- reduction in expenses. Automating routine tasks and making better use of the resources at hand can save costs for legal practices and their clients.
- A greater sense of alertness. AI can assist with due diligence by quickly and accurately reviewing contracts, financial records, and other relevant data in mergers and acquisitions or other legal deals.

- Always available. Artificial intelligence (AI) tools are constantly available for tasks like document processing and legal research since they are continually operating.

### **Cons of AI in the Practice of Law**

- **Employment Loss.**Task automation may cause some legal professionals to lose their careers, particularly those whose work involves repetitive and routine procedures.
- **Lack of Human Wisdom.**It may be challenging for artificial intelligence (AI) systems to understand complicated and situation-specific legal issues that require human judgment, empathy, and a full understanding of the local and global environment.
- **biased algorithms.**AI systems have the potential to inherit and propagate biases present in the training data. This process may lead to unjust results or worsen already-existing inequalities in the legal system.
- **Safety Concerns.**When AI is used to manage private legal data, concerns regarding data security and the potential for improper or harmful use arise.
- **Complexity and Implementation Expenses.**A large investment in infrastructure, training, and technology is needed to integrate AI in a legal practice. The intricacy of AI systems could make it difficult to integrate them with current workflows.
- **Legal and Moral Concerns.**The application of AI in law raises ethical questions that must be resolved, such as the requirement for moral guidelines in the creation and use of legal AI, responsibility for choices made by AI systems, and algorithm transparency.
- **Resistance to Change.**Because they are inexperienced with AI technologies, fear for their job security, or prefer more conventional approaches, some legal professionals may be reluctant to employ them. It may not always be easy to overcome this opposition during the implementation process.

### **Future Trends of AI in Legal Businesses**

If artificial intelligence algorithms continue to progress at this rate, just think of what will happen in 10, 20, or even 50 years. Robots and machines may or may not take over the world,

but one thing is for sure: there will be some significant trends in AI advancement, such as:

- **Increased automation:** In the future, law firms will employ artificial intelligence (AI) to automate a lot of legal tasks, including contract analysis, legal research, and document review. They'll do everything in their power to cut down on manual work.
- **Legal firms will be able to foresee future events with the use of AI-powered predictive analytics.** Put another way, these algorithms will be used to predict the outcomes of particular cases based on historical data. Forecasts will get more accurate as technology develops, allowing attorneys to hone their strategies.
- **Natural language interpretation:** NLP technologies will help lawyers and other legal professionals better understand complex documents and increase their language proficiency as they develop..
- **Enhanced intelligence:** You may be confident that computers won't replace lawyers in the near future. Instead of being a threat, artificial intelligence (AI) is a tool that attorneys may utilize to improve their decision-making, handle cases more swiftly and efficiently, and build closer relationships with their clients.
- **Cybersecurity:** As legal firms go to the internet and store all of their data there, the need for cybersecurity will grow more pressing than before. It is imperative to immediately implement stronger security measures to protect consumer information and thwart cyber attacks.
- **Use of chatbots:** As chatbot technology advances, clients will be able to receive answers to their questions day or night. Currently, chatbots are used to answer basic questions, but in the future, they will be able to help users with more challenging issues.
- **Electronically stored information (ESI) is gathered, preserved, and produced as part of the ediscovery process for judicial proceedings.** By finding patterns and trends in data, evaluating it, cutting expenses, prioritizing documents, and removing the possibility of human error, artificial intelligence (AI) can speed up the e-discovery process.

## AI AND PATENT LAW

Under the patent system, those who create new and useful inventions are rewarded with the exclusive right to use them for a predetermined period of time. In return, the inventor has to share their invention with the world so that others can profit from it and the state of the art can continue to advance. Nonetheless, humans are no longer the exclusive practitioners of this iterative invention process. As we mentioned in part of this series, AI systems are now producing "creative" outputs. However, Large-scale technical, scientific, and medical issues have already been addressed by systems like IBM's Watson and Google's DeepMind, time.<sup>1</sup>

### **What is the role of the “inventor” in patent law?**

As we covered in, the presence of a (human) author directly affects whether a work is granted any copyright protection at all. Patent law is a separate legal system. Despite possible legal ramifications, the inventor's name has no bearing on the innovation's patentability. This is because the patentability of an invention is decided objectively, instead of depending on the subjective "inventive" process or other mental processes of the inventor. The Australian High Court claims that if an invention is otherwise eligible for patent protection and is "stumbled across by accident" or "remembered from a dream," it may be granted a valid patent patentability.<sup>2</sup>

So what makes the identity of the inventor important? Ownership is the solution. A patent can only be awarded to the inventor (i.e., the person or persons in charge of the "inventive concept") or to a third party who inherits title from the inventor in the majority of jurisdictions. This could be the case, for instance, because of the transfer of rights under a contract, inventions made while working for a company, or acting as the surviving inventor's legal agent. It is crucial to make sure that it is clear who is entitled to a patent resulting from inventive activity, as patents are meant to promote innovation.

### **A global test: DABUS**

Under The Artificial Inventor Project, the topic of whether an AI system may be credited as the creator of patented material is being tested globally. The project consists of several "test"

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<sup>1</sup> Ryan Abbott, 'Everything is Obvious' (2018) 66 UCLA Law Review 2 at 22–6.

<sup>2</sup> Wellcome Foundation Ltd v VR Laboratories (Aust) Pty Ltd [1981] HCA 12 at [45]



patent applications that Dr. Stephen Thaler has submitted for inventions produced by his artificial intelligence system, "DABUS."

A form of "connectionist AI" known as DABUS, or "Device for the Autonomous Bootstrapping of Unified Sentience," leverages numerous neural networks to produce unique concepts, the novelty of which is subsequently evaluated by a second neural network architecture. Dr. Thaler has applied for patent protection for two "inventions" that DABUS separately developed with this technique: the fractal container, which is a food container, and the neural flame, which is a search and rescue beacon.

The global trend in patent offices and courts, with very few exceptions so far, has been to reject these applications on the grounds that it is not feasible to treat an AI system as an inventor for the purposes of patent law. Though the reasons have varied from country to country, there is a growing international consensus that an inventor of a copyrighted invention must be a human or a person with legal capacity.

We have already published results in:

- In Australia, the Full Court of the Federal Court, including five judges, unanimously decided that only a natural person can be an inventor. This decision overturned a previous one by a single judge, who had suggested that the definition of an inventor could change as technology advanced and included an AI system.<sup>3</sup>
- The UK Comptroller of Patents was right to deny Dr. Thaler's patent applications since the inventor had to be a natural person and Dr. Thaler had not demonstrated a sufficient derivation of rights from an inventor, according to the rulings of the High Court and Court of Appeal in the United Kingdom. Lord Justice Birss, one of the three judges on the Court of Appeal, disagreed with the majority of the other judges regarding the proper course of action for the Comptroller, even though he agreed that the term "inventor" under the Patents Act 1977 meant a natural person and could not include an AI. According to Birss LJ, the application ought to have been permitted to move forward with inspection and, if approved, grant, contingent upon any third-party

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<sup>3</sup> Dr. Thaler filed an appeal in *Thaler v. Commissioner of Patents* [2022] HCATrans 199, however his request for permission to appeal the Full Court's ruling to the High Court of Australia was denied.

challenges. The UK Supreme Court heard an appeal of the Court of Appeal ruling in March of this year, and a ruling is pending; and

- The European Patent Office ruled that an inventor needed to be a human with the capacity to make legal decisions. Dr. Thaler was not eligible to get a patent as the inventor's successor in title because he created and owned DABUS, and AI systems cannot transfer patents rights.<sup>4</sup>

In the US, the situation is comparable. Additionally, the US Patent and Trademark Office denied Dr. Thaler's patent applications, claiming that the specific legislative language—such as "individual" and "himself or herself"—that Congress used to define the term "inventor" was only applicable to humans beings.<sup>5</sup>

Both the US Court of Appeals for the Federal Circuit and the District Court for the Eastern District of Virginia rejected Dr. Thaler's attempt to overturn this ruling, and the US Supreme Court recently decided not to hear Dr Thaler's appeal.<sup>6</sup>

Additionally, Dr. Thaler's patent applications have been denied in Brand-New Zealand,<sup>7</sup> Taiwan,<sup>8</sup> Israel,<sup>9</sup> the Republic of Korea,<sup>10</sup> Canada,<sup>11</sup> Brazil,<sup>12</sup> and India<sup>13</sup>.

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<sup>4</sup> In decision J 8/20, a Legal Board of Appeal dismissed an appeal from this ruling. As you can see in EP 4 067 251 A1, Dr. Thaler has submitted a divisional application to the EPO.

<sup>5</sup> Univ. of Utah v Max-Planck-Gesellschaft, 734 F.3d 1315, 1323 (Fed Cir, 2013); Beech Aircraft Corp v EDO Corp, F.2d 1237, 1248 (Fed Cir, 1993)

<sup>6</sup> Thaler v Vidal, case number 22-919 before the Supreme Court of the United States.

<sup>7</sup> Decision of the Intellectual Property Office of New Zealand affirmed in the High Court of New Zealand on 17 March 2023: Thaler v Commissioner of Patents [2023] NZHC 554.

<sup>8</sup> Decision of the Taiwanese Patent Office affirmed by the Intellectual Property and Commercial Court of Taiwan: Thaler v Taiwan IP Office (TIPO), 110 Xing Zhuan Su 3 (August 2021).

<sup>9</sup> Decision of the Israeli Commissioner of Patents on 29 March 2023: Lexology, AI as an Inventor (online, 19 March 2023).

<sup>10</sup> Decision of the Korean Intellectual Property Office on 4 October 2022.

<sup>11</sup> The Canadian Intellectual Property Office has deemed Dr Thaler's patent application 'PCT non-compliant': patent application 3137161.

<sup>12</sup> On 6 September 2022, The Brazilian PTO issued its opinion that it is not possible to name an AI system as an inventor in a patent application and Dr Thaler's application has been withdrawn as a result: Lexology, Brazilian PTO issues an Opinion Declaring that Artificial Intelligence Cannot be Indicated as an Inventor in Patent Application (online, 13 October 2022).

<sup>13</sup> Decision of the Controller General of Patents; but note that a Parliamentary Standing Committee under the Department of Commerce in India has recommended legislative change to The Patents Act 1970 and the Copyright Act to accommodate the emerging technologies of AI and AI related inventions: Review of the Intellectual Property Rights Regime in India, Parliament of India (Report No 161, 23 July 2021) [8.5]: Lexology, Inventions by Artificial Intelligence: Patentable or Not? (online, 22 August 2022).

- (1) Three further requests were included in one of Dr. Thaler's appeals filed in Germany, asking for the patent to be granted without designating an inventor.
- (2) should include a sentence to the description making it clear that DABUS invented the invention.
- (3) to name "Stephen L. Thaler, PhD who prompted the artificial intelligence DABUS to create the invention" as the inventor. The third auxiliary request was approved by the Federal Patent Court's 11th Senate, which stipulated that a natural person must be identified as the inventor even if artificial intelligence played no part in the invention's conception.<sup>14</sup>

But in a related case involving a different DABUS patent, the Federal Patent Court's 18th Senate ruled that an AI-generated innovation patent cannot be approved unless the applicant removes all mention of the AI from the inventor name. The Federal Court of Justice may hear an appeal of either ruling, and it is anticipated that it will offer clarification.

The two exceptions to this rule are currently Saudi Arabia and South Africa, both of which have not yet conducted a thorough review of the patents.

### **If not AI, then who?**

Because of the way that Dr. Thaler argued the cases, no Australian, UK, or US court, nor the EPO, was required to answer to the question of who, if not DABUS, should have been named as the inventor of the relevant patents. However, the Full Court of the Australian Federal Court made some recommendations, including naming the following: the owner of the computer that the AI software is installed on; the AI's developer; the owner of the copyright in the software's source code; and the individual who enters the data that the AI uses to generate its output.

In light of the supplemental petitions filed in the German proceedings, the 11th Senate of the German Federal Patent Court decided, as previously indicated, that "Stephen L. Thaler, PhD who prompted the artificial intelligence DABUS to create the invention" was the correct inventor designation.

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<sup>14</sup> Federal Patent Court (Bundespategericht), decision of 11 November 2021 – 11 W (pat) 5/21. Written opinion delivered 31 March 2022 and published 19 April 2022.

It is likely to depend on the particular facts of a case who should be credited as the "inventor" of an innovation created with the assistance of an AI system. As it will always be evident that the same person or organization will ultimately be entitled to the patent, this question is likely to be academic in nature, regardless of which individual or individuals are deemed to be the "inventors" (e.g., the employers of the potential inventors or the owners of the AI system). Nevertheless, until a suitable case is tried in Who should be called the "inventor" of such an innovation will remain unclear, even though that topic must be taken into consideration.

### ***Implications for patent law Beyond inventors: the impact of AI on patentability***

Patent offices and courts are responsible for evaluating the claimed invention's novelty, ingenuity, and utility in addition to making sure that the invention is fully and precisely detailed in the patent specification before deciding whether or not to grant a patent. The "person skilled in the art" (PSA), a fictional but crucial entity, is at the center of many of these evaluations.

The PSA is the made-up individual who is supposed to be the intended recipient of the claimed invention. They are not especially innovative or creative, but they do possess the typical degree of competence and perception of individuals operating in the relevant field at the time. They also possess what's known as "common general knowledge," which is information that has been absorbed and acknowledged by the majority of those employed in the relevant field at the time.

The PSA has only ever been human for hundreds of years, and the law has only given them access to knowledge that they probably already have or are easily able to obtain.

### ***Inventive Step***

In most jurisdictions, one of the primary requirements for patentability is that the claimed invention must include a "inventive step." This is evaluated by looking at whether the invention would have been evident to the PSA given public knowledge and comparison to prior art.

The trial judge and the entire court on appeal in the Australian DABUS case questioned whether The level of creativity required to be reevaluated if, for instance, the PSA were thought to have access to AI systems, given the speed at which AI systems are being applied to new contexts..<sup>15</sup> The Full Court concluded that while the matter needed to be addressed

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<sup>15</sup> Thaler v. Commissioner of Patents, 2022, 289 FCR 45, at [120].

immediately, judges should exercise caution when interpreting current laws in ways that go beyond what the authors intended.

The law of obviousness has historically been sufficiently adaptable to take into account how innovation is evolving. For instance, the fictional PSA will frequently consist of an interdisciplinary team rather than simply one individual, mirroring how real investigation and creation is carried out. Additionally, the general public's understanding has changed to take into account number materials that PSAs would frequently consult or obtain access to, particularly the abundance of internet-based materials. Additionally, courts have been willing to find that routine process outcomes will be obvious even though they would not have been predictable in the past, at least in the UK advance.<sup>16</sup>

As AI systems would be widely employed in the relevant field, there is, in theory, no reason why these notions should not also encompass AI systems.

In actuality, though, these advancements can provide difficulties with the evidence. Given the variety of functionality, complexity, and sophistication of AI systems, it could be challenging to determine exactly what form of AI is included in the PSA's standard toolkit. The unpredictability of AI results is exacerbated by factors like the "black box" nature of AI systems and their reliance on the datasets used for training. As always, the quality of the evidence that can be presented—including the advice of knowledgeable subject-matter experts—will be crucial in determining how these questions are answered.

### ***Sufficiency***

The basic agreement of patent law is that inventors who disclose their inventions to the public will have a monopoly on it. This is mirrored in many countries' "sufficiency" or "enablement" threshold requirements. The innovation must be disclosed in the patent application in a clear, comprehensive, and detailed enough manner to enable the PSA to implement it without needing to conduct extra research or experimentation in order to secure exclusive rights.

The "black box" nature of many AI systems makes it impossible for humans to access or comprehend the functions that an AI system uses to get at its final output, which presents a special practical issue for sufficiency when an AI system is employed to produce an invention.

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<sup>16</sup> Refer to, for example, *Hospira UK Limited v. Genentech, Inc.* [2016] EWCA Civ 780.

It might not be possible to provide a complete disclosure that would allow others to use the invention if the person writing the patent specification does not fully comprehend how the invention was developed or how it is used..<sup>17</sup>

The "black box" issue has not just been raised in relation to patents; it has also been brought up in relation to the increasing application of AI in other domains, such as ensuring that decision-making procedures do not discriminate illegally or that medical or diagnostic models can be independently verified by medical professionals..<sup>18</sup>

The creation of "explainable AI"—models that can explain or offer insights into how they arrived at their outputs—might be a workable option in any scenario. However, some AI specialists claim that accuracy suffers when transparency increases..<sup>19</sup>

Researchers in artificial intelligence and a number of universities have made noteworthy progress toward the creation of explainable AI..<sup>20</sup>

### ***The Road Ahead***

The great majority of patent offices and courts worldwide have thus far refused to acknowledge AI as an inventor. It is noteworthy that the majority of their discussions have focused on the very specific issue of whether Dr. Thaler's patent applications complied with the formal requirements of the applicable laws. The more general topic of whether and how the patent system should take into account the creative contributions made by AI systems has been brought up by those rulings.

Governments are actively deliberating about that matter. For instance, a consultation conducted by the UK Intellectual Property Office and reported in 2022 listed a number of reform possibilities, including:

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<sup>17</sup> "Asking AI to Explain Itself - A Problem of Sufficiency," Steven Baldwin and Gabriella Bornstein, 2020 285 *Managing Intellectual Property* 35 at 36.

<sup>18</sup> Neil Savage, "Dissecting the Mysterious Field of Artificial Intelligence," *Nature Outlook: Robotics and AI* (March 29, 2022).

<sup>19</sup> Neil Savage, "Dissecting the Mysterious Field of Artificial Intelligence," *Nature Outlook: Robotics and AI* (March 29, 2022).

<sup>20</sup> The 2020 paper "Asking AI to Explain Itself - A Problem of Sufficiency" by Steven Baldwin and Gabriella Bornstein Neil Savage, "Breaking into the Black Box of Artificial Intelligence," *Nature Outlook: Robotics and Artificial Intelligence* (29 March 2022). 285 *Managing Intellectual Property* 35 at 36–7.

1. extending the meaning of "inventor" to encompass the people in charge of an AI system that produces inventions;
2. permitting AI to be recognized as the creator; or
3. safeguarding AI-generated inventions outside of the patent system.<sup>21</sup>

Remarkably, the UKIPO discovered that the majority of respondents supported maintaining present UK law in place for the time being because they believed AI was still too rudimentary to develop on its own without human guidance. In the end, the UK government decided to use this strategy.

Even though Dr. Thaler's application is still somewhat unique or unusual, it has brought attention to a conflict between current patent regulations and the needs of contemporary innovation. Within a system that presumes inventors have legal personality and the ability to enjoy and transfer rights, inventive AI occupies an uncomfortable space. It also poses difficult problems regarding the proper standards to use when judging disclosure sufficiency and originality.

But contemporary patent law has had to change over the years to keep up with the many scientific and economic breakthroughs. Artificial intelligence systems are the same as their predecessors in that sense. Judges and legislators will continue to alter the core principles of patent law in response to information about the real actions of inventors, with the goal of ensuring that the system of patents promotes innovation rather than stifles it.

## **AI AND COPYRIGHT LAW**

India has become a major global force since gaining its independence, particularly in the areas of globalization and technology growth. It is now home to the world's largest IT market and is a hub for global technological developments. Technology has also been advancing at a similar rate, if not faster; however, rather than entering as an invader, it is entering as a creator..<sup>22</sup>

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<sup>21</sup> Intellectual Property Office, *Artificial Intelligence and Intellectual Property: Copyright and Patents: Government Response to Consultation* (28 June 2022).

<sup>22</sup> Andres Guadamuz, 'Artificial intelligence and copyright' (WIPO MAGAZINE, October 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 on 10 July 2023

These days, we encounter a variety of digitally or through a digitally created works; these might be anything from technical records to artistic creations. Since the 1970s, artists have employed machinery as tools or catalysts in their creative processes, utilizing technology to support and enhance their work. Until now, the creative domain has been dominated by humans. Because human involvement was crucial to the creation of even the most computer-aided works, people were still regarded as the work's creators and owners. But as technology developed, this practice persisted and got better, enabling the creation of artistic works. autonomously and without the need for human manipulation.

Although it could be a boon to the entertainment sector, relieving financial and psychological strain, it also raises questions over the industry's legal standing.

## **ARTIFICIAL INTELLIGENCE AND COPYRIGHT**

In any circumstance involving creative works, copyright is a subject that eventually needs to be brought up. A creative work's copyright is the legal privilege that grants its legitimate creator and owner the ability to benefit entirely from it while prohibiting any unauthorized usage. In literature, music, film, and other media, artistic expression—which has always been created by humans—is protected by copyright. However, due to the rapid advancement of technology, Artificial Intelligence (AI) can now create creative works without the direct involvement of humans. This raises the issues of whose copyright these creations are and who should be given credit for their invention. These circumstances can lead to one of two outcomes:

1. AI-generated works under human supervision: In these cases, human ingenuity is indispensable, and the copyright belongs to the individuals who contributed.
2. Works produced by AI without direct human supervision: The question of authorship gets more complicated when AI produces works on its own without direct human supervision. The legal and intellectual contexts must be carefully considered when assigning authorship to AI.

For a work to be covered by copyright, it must be original. It must be the result of the author's skill, judgment, and creativity. It is debatable if AI is capable of creativity because its creations depend on human-developed algorithms and pre-existing data. One well-known example is ChatGPT, which uses massive amounts of data, including copyrighted information, to train its



algorithms. Additionally, Google has created software that uses descriptions and recordings to create original music. The boundaries between original and AI-generated content can become hazy due to AI technologies' capacity to imitate and copyrighted works already in existence. This can also lead to difficult legal situations. Even though AI can organize and combine data in novel ways, figuring out whether it has the required creativity it's still hard to reach the originality barrier. This gives rise to worries regarding possible copyright infringement.

### **Accountability and Violation**

Determining who is responsible for works produced by AI can be challenging. Understanding the roles played by developers, consumers, and the AI system itself is necessary. Producers and users of AI-generated content have an obligation to ensure that copyright laws are observed. However, when an AI system creates content without human involvement, it becomes more challenging to determine who the actual copyright owner is. When artificial intelligence (AI) violates copyright, it causes issues because it lacks legal personality. The Copyright Act often holds violators accountable, but AI is not recognized as a legal entity. To resolve liability problems, it is vital to establish explicit frameworks that assign accountability to AI developers, owners, or operators.

Many countries—including New Zealand, India, and Ireland—adopt the practice of granting copyright ownership to the AI system's programmer. This approach recognizes that the AI originated from the creative ideas of the programmer. India recently opted for a more lenient approach, granting co-ownership of Suryast creation to the AI RAGHAV, with its creator acting as the other co-author.<sup>23</sup>

In light of this, some argue that if an AI system independently produces a completely original work, it should be acknowledged as the creator and given exclusive copyright rights. Japan revealed in 2016 that a computer program had written a short novel that was considered for the national literary prize, providing evidence in favor of this claim. However, such an approach may face challenges because the majority of governments do not recognize AI machines as having a legal personality. In general, human imagination and intelligence are required for authorship under copyright regulations. United States, Spain, and Germany are among the

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<sup>23</sup> Rommel Khan, 'AI Works The Future Of Intellectual Property Law' (MONDAQ, 20 February 2023) [https:// www.mondaq.com/india/copyright/1284668/ai-works--the-future-of-intellectual-property](https://www.mondaq.com/india/copyright/1284668/ai-works--the-future-of-intellectual-property)

countries that have declared unequivocally that only works created by humans are entitled to copyright. In the landmark decision of *Infopaq International A/S v Danske Dagblades Forening*<sup>24</sup>, According to the Court of Justice of the European Union (CJEU), copyright is only applicable to unique works that accurately depict the "author's own intellectual creation." In yet another instance of *Acohs Pty Ltd. v Ucorp Pty Ltd.*<sup>25</sup>, AI-generated work was not granted copyrights by the Australian Court because it was not created by a human.

According to a different perspective, AI-generated works should be freely accessible to all users, just like creative commons. While this approach benefits the general public, it may discourage tech businesses from funding AI projects if they are unable to make money from the works produced.

## **INDIA'S LEGAL SCENARIO**

In India, the content of creative works is governed by the Copyright Act of 1957. In India, it is not considered AI-generated art. Section 2(d) of the legislation defines a "author" as any person or entity that causes the work to be made, whether living or legal ones. This idea states that artificial intelligence systems are not authors. Indian courts have reiterated this position in a number of decisions, stating unequivocally that AI systems cannot be considered authors of works covered by copyright.

A legal doctrine derived from the United States called "fair use" permits limited unrestricted use of copyrighted content under certain conditions. A work created by AI may or may not be considered fair use depending on a number of criteria, including purpose, nature, amount, and effect. In fair use analyses, transformative usage—which gives a copyrighted work a new meaning or expression—often plays a critical role.

## **THE WAY AHEAD**

There are various actions that can be taken to address the legal ramifications of AI-generated creative works in India:

- Revise Intellectual Assets rules: As AI technology develops, intellectual property rules

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<sup>24</sup> *Infopaq International A/S v Danske Dagblades Forening*(C-5/08) EU:C:2009:465 (16 July 2009)

<sup>25</sup> *Acohs Pty Ltd. v Ucorp Pty Ltd.* [2012] FCAFC 16

should be updated to reflect these developments. This includes acknowledging and resolving the particular issues with copyright ownership, fair use, and AI-generated content in the digital age.

- **Separate Criteria for AI-Generated Works:** AI may be recognized for its work using criteria different from traditional copyrights, even if it is not given legal status. This could fill in the gaps while maintaining the majority of the laws and guiding concepts.
- **Adhere to well established data usage and governance policies:** AI initiatives should follow these guidelines. To ensure that copyrighted content is used responsibly and ethically during AI training, these policies should incorporate oversight and compliance methods.
- **Mandate Compliance Officers:** It should be mandatory for AI companies to designate compliance officers who will handle copyright defense, audits, and evaluations. These officials would make sure AI-generated material complies with copyright regulations and spot any possible violations.

AI-generated works are neither expressly covered by India's current Copyright Act of 1957, nor is AI acknowledged as an author. It may be necessary to amend copyright rules in order to handle the particular difficulties that AI technology presents. These changes can include classifying AI as a distinct entity or establishing a new category for works that are only concerned with content produced by AI.

## **AI AND TRADEMARK LAW**

### ***Introduction***

Artificial intelligence is revolutionizing trademark law in this quickly evolving field of intellectual property law by upending long-held assumptions. The nexus between AI and trademark law presents a wealth of opportunities and difficulties, necessitating a thorough comprehension of both current advancements and potential long-term impacts. Artificial intelligence has revolutionized trademark management procedures by providing extraordinarily high levels of accuracy and efficiency in tasks like research, enforcement, and trademark monitoring. These technologies continue to advance at a rate that has never been witnessed before. Experts in trademark law are able to quickly identify infringements and

conflicts through artificial intelligence. AI-inspired methods that make it easier to navigate large databases accurately. Nonetheless, trademark owners are able to protect their brands through the fervent digital platform observation provided by AI-powered real-time brand monitoring systems businesses in a world that is becoming more linked. But these kinds of evolutions also bring up difficult legal questions, like how to settle legal ambiguity, who is responsible for trademark infringement when AI generates the brand, and more significant moral and legal ramifications. Given this, it is clear that AI is revolutionizing the field of trademark law. It is essential to consider current legislative and regulatory developments, potential future difficulties, and opportunities.<sup>26</sup>

### ***The Application of AI in Trademark Management***

The utilization of the use of artificial intelligence (AI) has revolutionized conventional trademark oversight methodologies by offering unparalleled levels of efficacy and precision. Let's examine the salient features of AI's advancement in trademark management:

- I. **AI-Powered Trademark Searching:** The world of brand protection has radically changed as a result of this breakthrough. Trademark practitioners may now do extensive searches over massive libraries of already-registered trademarks and other data with never-before-seen speed and accuracy. Because artificial intelligence systems are so good at spotting even the smallest differences and similarities between trademarks, it is possible to detect potential trademark issues very rapidly. This feature expedites the trademark clearance procedure and lessens the possibility of inadvertently violating already-registered trademarks.
- II. **Real-Time Brands Monitoring:** The advent of AI brand monitoring technology has marked a new chapter in proactive brand security. These systems continuously search a range of online venues, including social media networks, e-commerce websites, and digital marketplaces, to identify any trademark infringements in real-time. By employing artificial intelligence (AI), trademark owners can promptly identify instances of unlawful usage, counterfeit goods, and brand dilution, allowing for enforcement actions and early

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<sup>26</sup> Wills, K. (2022). AI around the World: Intellectual Property Law Considerations and beyond. *Journal of the Patent & Trademark Office Society*, 186.

intervention. Real-time brand monitoring is necessary to protect brand integrity and put an end to illicit activities on digital platforms.

**III. Expanded Enforcement skills:** Trademark owners now have access to enhanced enforcement capabilities, enabling them to effectively confront infringement, owing to artificial intelligence technologies. Artificial intelligence systems are capable of analyzing vast volumes of data to identify patterns in illegal distribution, counterfeit goods manufacturing, and trademark infringement. Furthermore, AI-powered enforcement technologies enable the automation of enforcement processes, such as the issue of takedown requests, cease-and-desist letters, and court filings. Artificial Intelligence (AI) facilitates faster resolution of trademark disputes and more efficient use of resources by automating repetitive tasks and streamlining enforcement procedures.

#### **Challenges and Legal Issues to take into Account:**

- 1. Trademark Liability Attribution produced by artificial intelligence:** Ascertaining accountability for trademarks produced by AI is a significant problem in trademark law. Ownership and responsibility problems arise when AI systems create trademarks without human participation. Courts need to address agency and accountability issues in order to design frameworks that allocate blame among AI creators, users, and the AI systems themselves.
- 2. Ambiguities in the Trademark Infringement:** With the increasing prevalence of AI-generated content, traditional notions of trademark infringement grow increasingly complex. The difficulty of distinguishing between real and artificial intelligence (AI)-generated logos, slogans, and other trademark-related content is increasing. The difficulty facing courts is adjusting the existing legal systems to account for the small differences between AI-generated trademarks and providing clear guidelines for infringement.
- 3. Ethical and Regulatory Implications:** Beyond only legal concerns, incorporating AI into trademark law raises ethical and regulatory concerns. Stakeholders need to address concerns about algorithmic bias, data privacy, and the ethics of using AI to manage intellectual property. Regulatory authorities bear the responsibility of formulating guidelines and norms to ensure the moral advancement and utilization of AI technologies in the trademark industry.

**4. Human Involvement Requirements:** In the past, persons had to be present when a brand was being invented and registered according to trademark law. However, as AI systems develop, it becomes more difficult to ascertain the level of human intervention necessary to qualify a trademark. Legislators and courts must determine the extent to which AI-generated trademarks should be eligible for registration and protection.

**5. Preservation of Consumer Trust:** The growing application of AI in trademark management raises questions about how to maintain consumer trust. When AI algorithms are used to automate tasks like trademark monitoring and searching, there is a potential for errors or oversights, which could reduce consumer confidence in the legitimacy of trademarks. AI-driven processes must be accurate, open, and accountable in order to maintain consumers' trust in the business.

**6. International Harmonisation:** The broad reach of trademark law and the rapid advancement of AI technology pose challenges to international harmonisation. Diverse legal frameworks and approaches to AI regulation across nations impede efforts to establish consistent standards and rules for AI in trademark law. Collaborative measures are necessary to improve the international mutual recognition of intellectual property rights, harmonize legal concepts, and facilitate information flow. Future Repercussions and considerations:

- **Development of Ethical AI:** Keeping AI relevant to trademark law while ensuring its ethical development is a challenging task. Stakeholders must prioritize the ethical application of AI technology, taking into account elements like algorithmic bias, neutrality, and transparency. By promoting moral AI development methods, we may minimize potential risks and maintain equity and justice in trademark supervision.
- **Continuous Monitoring and Adaptation:** As AI technologies evolve and new challenges arise, keeping up with the newest changes in trademark law necessitates ongoing observation and adjustment. Trademark specialists must remain vigilant, always assessing the ways in which AI is impacting trademark management practices and adapting their strategies accordingly. By staying alert, flexible, and informed, trademark experts may successfully navigate the constantly evolving field of artificial intelligence in trademark law and preserve the integrity of intellectual property rights in the digital age.

- **Regulatory Frameworks:** Robust regulatory frameworks that address emerging problems and foster innovation are necessary as artificial intelligence (AI) becomes more and more integrated into trademark law. Lawmakers have to cooperate with technologists<sup>27</sup>, legal experts, as well as corporate stakeholders, to enact legislation that provides clarification on issues like as AI governance, liability attribution, and data security. Regulatory frameworks that establish clear standards and guidelines can promote ethical behavior.
- **Adaptation and Innovation:** Trademark specialists need to be adaptable and innovative in order to successfully navigate the rapidly changing field of artificial intelligence in trademark law. In order to optimize the use of AI in trademark portfolio management, it is imperative to engage with AI technology, engage in continuous learning, and adopt optimal practices. Trademark specialists who embrace innovative methods and stay abreast of technological developments can enhance efforts to protect brands and expedite trademark management processes.

Collaboration and Knowledge Sharing: Group approaches and knowledge-sharing initiatives are essential for effectively handling the significant challenges posed by AI in trademark law. Stakeholders from academia, government, business, and civil society should get together to exchange ideas and best practices and to collaborate on research and development projects. We might all be able to work together to solve new challenges, inspire creativity, and improve the moral application of AI to society by promoting cooperation and information sharing management.<sup>28</sup>

To summarise, the introduction of artificial intelligence (AI) into trademark law represents a substantial shift in the intellectual property landscape, marked by both innovative opportunities and challenging challenges. Recent developments have shown how artificial intelligence (AI) may enhance trademark management through the provision of real-time monitoring, efficient searches, and enhanced enforcement capabilities. However, these changes also carry with them challenging legal problems, like disagreements over who is to blame, ambiguous accusations of trademark infringement, and broader ethical and legal implications. Proactive adaptation and

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<sup>27</sup> K. Wills (2022). AI Globally: Beyond Intellectual Property Law Considerations. *The Patent & Trademark Office Society Journal*, 186.

<sup>28</sup> Batty, Rob, Trade Mark Infringement and Artificial Intelligence (August 16, 2021). *New Zealand Business Law Quarterly*

collaboration are critical for successfully navigating the evolving trademark landscape in the future. Achieving a balance between innovation and intellectual property protection, anticipating technological advances, and promoting the growth of moral AI.<sup>29</sup>

By employing collaborative tactics such as global harmonisation programs, interdisciplinary collaboration, and stakeholder involvement, the trademark ecosystem can efficiently address the various concerns arising from artificial intelligence (AI) while maximising its potential benefits. Ultimately, by supporting responsible innovation and upholding the principles of transparency, accountability, and cooperation, parties may ensure that trademark law remains robust, equitable, and effective in defending intellectual property rights in the digital age. fairness.<sup>30</sup>

## **AI AND TRADE SECRETS**

Trade secrets encompass confidential information integral to a company's competitive advantage. Unlike patents or copyrights, trade secrets are not publicly disclosed, relying on secrecy for protection. Common examples include formulas, processes, customer lists, and marketing strategies. Trade secret protection is typically governed by state laws or the Uniform Trade Secrets Act, emphasizing the importance of reasonable efforts to maintain secrecy. While trade secrets offer perpetual protection, they can be challenging to enforce and susceptible to misappropriation. Despite these challenges, trade secrets remain a vital asset for businesses, fostering innovation and competitiveness in various industries.

In India, artificial intelligence (AI) is rapidly emerging as a transformative force across various sectors, including healthcare, agriculture, finance, and education. Government initiatives such as the National AI Strategy aim to position India as a global leader in AI research, development, and deployment. Major technology companies and startups are investing heavily in AI-driven solutions tailored to the Indian market, addressing challenges such as healthcare access, agricultural productivity, and urban infrastructure. However, concerns about data privacy, ethics, and job displacement accompany this technological advancement. Balancing innovation

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<sup>29</sup> Gangue, Dev S., *Eye, Robot: Artificial Intelligence and Trade Mark Registers* (October 10, 2019). Forthcoming in N. Bruun, G. Dinwoodie, M. Levin & A. Ohly (eds.), *Transition and Coherence in Intellectual Property Law*, (Cambridge University Press, 2020), <https://ssrn.com/abstract=3467627>

<sup>30</sup> Artificial Intelligence and Trade Mark Assessment, Moreland, Anke, and Vieites Novaes de Freitas, Conrado (October 30 29, 2019). In Hilty, R., Liu, K-C., & Lee, J-A. (eds.), *Artificial Intelligence & Intellectual Property*, Oxford University Press, pp. 266–291, Moreland, A. & Freitas, C. (2021), *Artificial intelligence and trade mark evaluation*, available at SSRN: <https://ssrn.com/abstract=3683807>



with regulatory frameworks and societal implications is crucial for realizing the full potential of AI in India's socioeconomic development.

In India, trade secrets are integral to business competitiveness and innovation, encompassing confidential information that provides an edge over competitors. Examples include formulas, manufacturing processes, and customer lists. The legal framework for trade secrets in India comprises various statutes and principles, including common law, contractual obligations, and statutory provisions. Under the Indian legal system, trade secrets are primarily protected through the common law principles of confidentiality and equity, as well as contractual agreements such as nondisclosure agreements (NDAs). Additionally, the Information Technology Act, 2000, offers statutory protection against unauthorised access to computer systems, which can help safeguard digital trade secrets.

The Indian judiciary often relies on principles of equity and fairness to adjudicate trade secret disputes, ensuring that businesses are adequately protected against misappropriation. Notable cases like *N. Radhakrishnan v. Maestro Engineers* have reinforced the importance of protecting trade secrets under Indian law. To qualify for protection, businesses must demonstrate that reasonable steps have been taken to maintain the secrecy of the information. While trade secrets provide perpetual protection, enforcement can be challenging, requiring evidence of misappropriation.

In summary, trade secrets are vital assets for businesses in India, driving innovation and competitiveness. The legal framework, including common law principles and statutes like the Information Technology Act, 2000, provides avenues for protection and enforcement, safeguarding confidential information and promoting economic growth. In India's rapidly evolving economy, where intellectual property rights enforcement can be challenging, trade secrets offer a flexible and cost-effective means of safeguarding proprietary information, thus promoting investment in research and development and driving economic growth.<sup>31</sup>

### **Relationship of AI and Trade Secrets:**

AI plays a crucial role in trade secret protection by enhancing security measures, detecting unauthorised access, and mitigating risks of misappropriation. Machine learning algorithms

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<sup>31</sup> Details regarding synopsis of Trade Secrets (Last visited on 20th February 2024), available at: [https://papers.ssm.com/sol3/papers.cfm?abstract\\_id=3796211](https://papers.ssm.com/sol3/papers.cfm?abstract_id=3796211)

can analyse vast amounts of data to identify anomalies or suspicious activities, enabling proactive threat detection. Natural language processing (NLP) techniques<sup>32</sup> aid in monitoring and analysing communications to prevent leakage of sensitive information. Additionally, AI-powered encryption and access control mechanisms strengthen the confidentiality of trade secrets, ensuring that only authorised individuals can access proprietary information, thus safeguarding against theft or unauthorised disclosure.

The intersection of trade secrets and AI introduces risks and challenges such as data security threats due to increased access to sensitive information. Algorithmic biases may inadvertently compromise trade secret protection, while the potential for reverse engineering poses a risk of proprietary information exposure. Insider threats remain a concern, as AI systems may not always effectively detect malicious activities by employees or partners. Regulatory compliance complexities arise concerning data privacy regulations. Additionally, ethical dilemmas surrounding privacy, fairness, and transparency in AI implementation require careful consideration. Addressing these challenges necessitates a multifaceted approach integrating technology, policy, and legal safeguards.

The intersection of AI and trade secrets presents numerous opportunities and advantages<sup>33</sup>. AI-powered tools enhance trade secret protection by bolstering security measures, detecting anomalies, and identifying potential threats more efficiently. Advanced analytics and machine learning algorithms enable organizations to gain valuable insights from large volumes of data while maintaining confidentiality. AI facilitates automated monitoring of trade secret usage, enabling proactive risk mitigation and rapid response to security breaches. Additionally, AI-driven innovation accelerates the development of new products and processes, enhancing competitiveness in the marketplace. Leveraging AI in trade secret management fosters greater efficiency, effectiveness, and strategic advantage for businesses operating in the digital age.<sup>34</sup>

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<sup>32</sup> Details regarding Natural Language Processing Techniques (last visited on 20th February 2024), available at: [https://www.researchgate.net/publication/319164243\\_Natural\\_Language\\_Processing\\_State\\_of\\_The\\_Art\\_Current\\_Trends\\_and\\_Challenges](https://www.researchgate.net/publication/319164243_Natural_Language_Processing_State_of_The_Art_Current_Trends_and_Challenges)

<sup>33</sup> Details regarding the opportunities and advantages in relation to the intersection of AI and Trade Secrets (last visited on 21st February 2024), available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3759349](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3759349)

<sup>34</sup> Details regarding the Relationship of AI and Trade Secrets (last visited on 21st February 2024), available at: <https://www.irjet.net/archives/V10/i12/IRJET-V10I1238.pdf>

## Judicial Precedents and Legal framework regarding Trade secrets and AI

Several laws and regulations contribute to the legal framework governing trade secrets and AI in India like, Indian Contract Act, 1872<sup>35</sup> provides the legal basis for contracts and agreements, including those involving the protection of trade secrets through non-disclosure agreements (NDAs)<sup>36</sup> and confidentiality clauses. The Information Technology Act, 2000 (Amended in 2008)<sup>37</sup> deals with various aspects of electronic commerce and cybersecurity. While it does not specifically address trade secrets, it offers provisions related to data protection and privacy, which are essential for safeguarding trade secrets in digital environments. Although patents and trade secrets are distinct forms of intellectual property, some innovations may be eligible for both forms of protection. The Patents Act<sup>38</sup> regulates the grant and enforcement of patents in India. Furthermore, The Copyright Act, 1957 (Amended in 2012)<sup>39</sup> protects original literary, artistic, and other creative works, including software code and algorithms used in AI systems. While copyright primarily protects expression rather than ideas, it can still play a role in safeguarding AI-related trade secrets. Additionally, The Competition Act, 2002<sup>40</sup> (Amended in 2007) addresses anti-competitive practices, including unfair competition through the misappropriation of trade secrets. It prohibits agreements, abuse of dominant positions, and combinations that have adverse effects on competition.<sup>41</sup>

There are cases where trade secret disputes involve technologies or innovations that utilize AI. The Alibaba Group Holding Ltd. v. Tencent Holdings Ltd. (China) while not specifically relating to AI, involved allegations of trade secret misappropriation in the context of technology

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<sup>35</sup> The Indian Contract Act, 1872 (Act no. 9 of 1872) (last visited on 21st February 2024) available at: <https://www.indiacode.nic.in/bitstream/123456789/2187/2/A187209.pdf>

<sup>36</sup> Details about Nondisclosure Agreements (NDAs) for Legally Protecting Trade Secrets may be found at <https://www.justia.com/intellectual-property/trade-secrets/#:~:text=One%20of%20the%20simple%20ways,to%20enforce%20a%20trade%20secret> (last accessed on February 22, 2024).

<sup>37</sup> The Information Technology Act, 2000 (Amended in 2008) (Act No. 10 of 2009)(last visited on 23rd February 2024), available at: [https://www.indiacode.nic.in/bitstream/123456789/15386/1/it\\_amendment\\_act2008.pdf](https://www.indiacode.nic.in/bitstream/123456789/15386/1/it_amendment_act2008.pdf)

<sup>38</sup> The Indian Patents Act, 1970 (Act No. 39 of 1970) (last visited on 23rd February 2024), available at: [https://www.indiacode.nic.in/handle/123456789/1392?sam\\_handle=123456789/1362](https://www.indiacode.nic.in/handle/123456789/1392?sam_handle=123456789/1362)

<sup>39</sup> The Copyright amendment Act 1957 (amended in 2012) (Act No. 14 of 1957) (last visited on 23rd February 2024), available at: <https://www.jstor.org/stable/43953639>

<sup>40</sup> The Competition Act 2002 (Act No. 12 of 2003) (last visited on 24th February 2024), available at: [https://www.indiacode.nic.in/handle/123456789/2010?view\\_type=browse&sam\\_handle=123456789/1362](https://www.indiacode.nic.in/handle/123456789/2010?view_type=browse&sam_handle=123456789/1362)

<sup>41</sup> Details regarding the Protection of Trade Secrets and Confidential information India (last visited on 22nd February 2024) available at: <https://www.mondaq.com/india/trade-secrets/1402128/protection-of-trade-secrets-and-confidentialinformation-in-india#:~:text=However%2C%20the%20essence%20of%20trade,inappropriate%20disclosure%20of%20private%20information.>

development and competition between two major Chinese tech companies. The case underscores the importance of protecting proprietary technology and trade secrets in the digital economy. Furthermore, in *Uber Technologies Inc. v. Levandowski (USA) Mark Harris*, *Inside the Uber and Google settlement with Anthony Levandowski*, TechCrunch (Feb. 16, 2022), Uber claimed that Anthony Levandowski, one of its former engineers, had stolen trade secrets pertaining to self-driving car technology when he departed to found his own business, which Uber eventually purchased. The dispute shed light on the challenges of protecting trade secrets in emerging technologies such as autonomous vehicles, where AI plays a significant role. Moreover, the case of *NDA Group, LLC v. Pivotal Solutions, Inc. (USA)* involved allegations of trade secret misappropriation related to the development of AI-powered software for financial forecasting. While not widely known, it illustrates how trade secrets can be implicated in the context of AI-driven innovations and the importance of protecting proprietary algorithms and data.

At last, In the AI era, protecting secrets requires a multifaceted approach. Employ robust encryption methods to safeguard data, implement access controls to limit unauthorized access, and anonymize or pseudonymize sensitive information. Utilize watermarking and DRM to track data usage<sup>42</sup>, complemented by AI-driven behavioural analytics to detect anomalies. Prioritize secure development practices, enforce NDAs and confidentiality policies, and conduct regular security audits. Foster employee awareness through comprehensive training programs and ensure compliance with relevant legal and regulatory requirements. Finally, establish a culture of vigilance and continuous monitoring, leveraging AI tools to detect and respond to emerging threats promptly.

This integrated strategy fortifies protection in the dynamic landscape of AI-driven innovation.

The intersection of trade secrets and AI presents both opportunities and challenges for businesses operating in the digital age. While AI offers advanced tools for enhancing trade secret protection and driving innovation, it also introduces new risks such as data security threats and algorithmic biases. To navigate this complex landscape successfully, organizations must adopt a holistic approach that combines technological solutions, robust policies, and legal safeguards. By leveraging encryption, access controls, behavioural analytics, and employee

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<sup>42</sup> Information regarding Watermarking and DRM (Last visited on 24th February 2024), available at: <https://support.caplinked.com/hc/en-us/articles/208200383-What-is-Watermarking-DRM-Document-Editing>

training, businesses can mitigate risks and safeguard their valuable intellectual property assets in the AI era. Ultimately, embracing AI responsibly can strengthen competitiveness and foster sustainable growth in today's rapidly evolving business environment.

## **POLICY AND REGULATORY DEVELOPMENTS ON AI LAWS**

As of right now, AI is not specifically regulated by any codified laws, statutory norms, or regulations in India. However, a number of frameworks are being developed to direct the regulation of AI, such as:

- I. The objective of the June 2018 National Strategy for Artificial Intelligence is to lay a solid foundation for future AI legislation in India.
- II. The Principles for Responsible AI (February 2021), which act as India's guide for building a morally sound AI ecosystem including several industries.
- III. The Operationalizing Principles for Responsible AI (August 2021), which highlights the necessity of capacity building, ethical AI by design, and regulatory and legislative actions.

### **The AI Regulations' current state**

As mentioned above, India does not yet have any laws or regulations that specifically address artificial intelligence.

### **Additional legislation pertaining to AI**

While not specifically intended to control AI, a number of legislation may have an impact on how AI is developed or applied in India. A partial list of noteworthy instances comprises:

- These include the Information Technology (Reasonable security policies and procedures and sensitive personal data or information) Rules 2011 and the Information Technology Act 2000. The Digital India Act 2023 (which is presently in draft form) will take its place.
- The Digital Personal Data Protection Act 2023 has not yet gone into effect as of the

time of publication.<sup>43</sup>

The ideas outlined in these regulations are meant to be applicable regardless of the technologies in use, as they are intended to be technology-agnostic.

AI development and use may be impacted by intellectual property regulations in a number of ways.

### **What "AI" means.**

As mentioned above, India does not yet have any laws or policies that specifically govern AI. As a result, India lacks a singular, legally accepted definition of "AI."

But according to the Principles for Responsible AI, AI is “a constellation of technologies that enable machines to act with higher levels of intelligence and emulate the human capabilities of sense, comprehend and act. Computer vision and audio processing can actively perceive the world around them by acquiring and processing images, sound, and speech. The natural language processing and inference engines can enable AI systems to analyse and understand the information collected. An AI system can also take decisions through inference engines or undertake actions in the physical world. These capabilities are augmented by the ability to learn from experience and keep adapting over time.”<sup>44</sup> How much of this description gets embraced by the general public is yet to be determined.

### **Range of territory**

As mentioned above, India does not yet have any laws or regulations that specifically address artificial intelligence. As a result, at current time there is no defined territorial scope.

### **Sectoral Range**

As was already said, AI is not currently specifically regulated by any laws or regulations in India. Consequently, there isn't now a defined sectoral scope. However, several industry-

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<sup>43</sup> The file titled "Digital Personal Data Protection Act 202023.pdf" can be accessed at [https://www.meity.gov.in/writereaddata/files/..](https://www.meity.gov.in/writereaddata/files/)

<sup>44</sup> See Principles for Responsible AI, p.7.

specific rules for regulating AI use have been put in place in India. Key instances, though not all-inclusive, include:

- A circular regarding the reporting requirements for AI and machine learning applications and systems that are marketed and utilized in the finance sector was released by the Securities and Exchange Board of India in January 2019..<sup>45</sup>
- The National Digital Health Mission's strategy highlights the necessity for rules and guidelines to be developed in the health sector in order to guarantee the dependability of AI systems.

### **Roles in Compliance**

As mentioned above, India does not yet have any laws or regulations that specifically address artificial intelligence. As such, there aren't any particular or special requirements placed on those who create, utilize, run, and/or implement AI systems.

### **The main concerns that the AI Regulations aim to resolve**

As mentioned above, India does not yet have any laws or regulations that specifically address artificial intelligence. The National Strategy for Artificial Intelligence (2018), however, emphasizes the necessity of "responsible AI" and stresses the significance of being aware of "the probable factors of the AI ecosystem that may undermine ethical conduct, impinge on one's privacy, and undermine the security protocol."According to the Principles for Responsible AI, improper management of AI systems could have gravely negative economic repercussions.<sup>46</sup>

### **Classification of Risks**

As mentioned above, India does not yet have any laws or regulations that specifically address artificial intelligence. Furthermore, AI is not typically categorized based on risk in the applicable frameworks and principles. Legislators and officials currently seem more interested

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<sup>45</sup> [https://www.sebi.gov.in/legal/circulars/jan-2019/reporting-for-artificial-intelligence-ai-and-machine-learning-mlapplications-and-systems-offered-and-used-by-market-intermediaries\\_41546.html](https://www.sebi.gov.in/legal/circulars/jan-2019/reporting-for-artificial-intelligence-ai-and-machine-learning-mlapplications-and-systems-offered-and-used-by-market-intermediaries_41546.html).

<sup>46</sup> See National Strategy for Artificial Intelligence, p.85

in the application of AI in high-risk industries (including finance and health) than in AI systems that are deemed high risk in and of themselves.

However, it is anticipated that the proposed Digital India Act 2023 will control high-risk AI systems and outline particular "no-go" zones for businesses and internet intermediaries using AI and machine learning in applications that interact with consumers.

### **Important prerequisites for compliance**

As mentioned above, India does not yet have any laws or regulations that specifically address artificial intelligence.

However, the following general guidelines for responsible AI management are identified by the Principles for Responsible AI, and these might be utilized by pertinent Indian stakeholders:

- The reliability and safety principle
- The equality principle
- The nondiscrimination and inclusion principle
- The security and privacy principle
- The openness principle
- The accountability principle
- The idea of defending and upholding moral principles in human behavior

### **Regulators**

There isn't yet a regulator in India dedicated to AI. Consequently, committees have been established to introduce a policy framework for artificial intelligence, and the Ministry of Electronics & Information Technology serves as the executive agency for AI-related strategies.

Additionally, "Artificial Intelligence Task Force" has been established by the Ministry of



Commerce and Industry,<sup>47</sup> with the intention of eventually establishing a governing body for artificial intelligence.

### **Penalties and enforcement authority**

As mentioned above, India does not yet have any laws or regulations that specifically address artificial intelligence. As a result, relevant infractions in non-AI legislation regulate enforcement and penalties pertaining to the development, distribution, and/or use of AI.

### **CONCLUSION**

The intersection of Artificial Intelligence (AI) and Intellectual Property (IP) law presents both significant challenges and opportunities. As AI continues to advance, it disrupts traditional notions of inventorship, authorship, and ownership, pushing the boundaries of existing legal frameworks. These disruptions necessitate a re-evaluation of current IP laws to ensure they remain relevant and effective in a rapidly evolving technological landscape.

In the realm of patents, AI's ability to create inventions raises fundamental questions about who—or what—can be recognized as an inventor. The current legal systems, built on the premise of human inventorship, struggle to accommodate AI-generated innovations. Similarly, in copyright law, AI's capacity to produce creative works challenges the notion of originality and authorship, prompting debates over ownership and protection of AI-generated content.

Trademarks and trade secrets are also impacted by AI, particularly in terms of brand management and the protection of confidential information. AI-driven tools can enhance trademark enforcement and trade secret management, but they also introduce new risks and complexities that require careful consideration. The ongoing legal and ethical debates highlight the need for adaptive legal frameworks that balance innovation with the protection of creators' rights.

Looking ahead, it is clear that the legal landscape must evolve to address the unique challenges posed by AI. Policymakers, legal practitioners, and industry stakeholders must collaborate to develop forward-looking IP laws that not only accommodate AI's capabilities but also safeguard the fundamental principles of intellectual property. By doing so, we can foster an

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<sup>47</sup> See <https://www.aitf.org.in/>.

environment where innovation thrives while ensuring that the rights and interests of all stakeholders are protected.