The Strategic and Civilized AI

Analytical Report

Assessing the Indexes on Determining the Relationship and Trajectories of AI Ethics and Intellectual Property Law

RAHUL DHINGRA

Research Intern

AATHIRA PILLAI

Research Intern

INDIAN SOCIETY OF ARTIFICIAL INTELLIGENCE & LAW

INDIAN SOCIETY OF ARTIFICIAL INTELLIGENCE & LAW

About the Authors

Rahul Dhingra and Aathira Pillai are the Research Interns for the Indian Society of Artificial Intelligence & Law. The report was subject to supervision under the Research Coordinators of the Strategic and Civilized AI initiative.

Synopsis of the report

Artificial intelligence (AI) is increasingly driving key technological and business advances. It is used in a wide range of sectors and has an impact on practically every area of production. AI's progress is being fueled by the availability of vast amounts of training data and breakthroughs in affordable high processing power. In a variety of ways, AI and intellectual property (IP) collide. The simulation of human intelligence processes by machines, particularly computer systems, is known as artificial intelligence (AI) though no explicit definition has explained Artificial Intelligence. Expert systems, natural language processing (NLP), speech recognition, and machine vision are examples of AI applications. Learning, reasoning, and self-correction are the three cognitive processes that AI programming focuses on IP should be used as a regulatory structure to encourage invention and innovation through the use of market forces.Justification of IP rights for AI as a tool and AI-generated output in light of IP protection based on a complex study of the outputs, productions, or applications generated by, or with the assistance of, AI systems, tools, or techniques that are susceptible of IP protection, with a focus on the works promoted and created by AI based systems.

This report delves into the AI prospects of the Intellectual Property Laws, the efficiency of the various Artificial Intelligence Indices released by the companies, and the relevance of AI Indexes and its coherence in contemporary pertinence with the AI and Intellectual Property Laws.

AI had gained traction since its beginning in the early 1950s, and it had branched out into three distinct domains. The first is Alan Turing's "symbol processing hypothesis," which he developed as the "founding father" of AI.Robotics was the second branch that drew a lot of attention. The so-called "learning approach" has been the subject of the third line of research.(Computing Machinery and Intelligence, 1959)

The last branch, also known as machine learning (hereinafter ML), grew to such a large size and widespread usage penetration in the mid-2000s that it is now widely regarded as a general purpose technology (hence GPT) and is referred to as the most important AI technology.(Intellectual Property Justification for AI)

According to the labour theory, persons are entitled to possess property rights based on the labour they put in to obtain the subject matter, i.e., they are entitled to earn the "fruits of their own labour."(Clearing the Rubbish: Locke, the Waste Proviso, and the Moral Justification of Intellectual Property, 2009)

According to the personality concept, creating something and making it available to the broad public is an expression of personality, which is thought to be based on a person's interaction with external objects.(Property and Personhood, 1982)

Giving someone a reward for contributing to society's enrichment is fair, according to the reward theory. Its origins in the patent sector can be traced back to John Stuart Mill, who was also a supporter of Jeremy Bentham.(Principles of Political Economy, 1870/1909). Based on the above three theories, IP justification is based on the bottom line with the most prominent rationale that lawmakers and legislators along with scholars maximize the social welfare in totality while shaping the Intellectual Property Rights.

AI-induced losses in conventional creative (copyright) or R&D-related (patent) fields could pose a threat to society. This problem, however, cannot be handled through IP legislation because IP's primary mission is to promote innovation rather than to preserve tradition or to achieve broad social policy goals. Thus essentially implying Intellectual Property Rights has to be scrutinized in the light of specific situations and in the context of Artificial Intelligence, creation and innovation operate under unequal situations; there may be radically distinct needs for the necessary investments, life cycles, and amortization possibilities for each AI tool and output. The AI Index is a comprehensive annual analysis on AI's present state. It covers autonomous systems, artificial intelligence research and development, the AI market, public perception of AI, and most importantly – technical performance.

This report delves into the AI prospects of the Intellectual Property Laws, the efficiency of the various Artificial Intelligence Indices released by the companies, and the relevance of AI Indexes and its coherence in contemporary pertinence with the AI and Intellectual Property Laws.

Prospects of AI in Intellectual Property Law: An Overview

The era of intelligent machines began with the invention of computers. Not only were these machines suitable of automation, but they were also adept of Intelligent Automation (IA). Technology has advanced at a frenetic pace over the last three decades, and this is evident by the number of computer hardware. Faster hardware leads to more complicated software, which results in complex interdependent systems.
Patent rules were enacted at a period when technology was defunct, and they have developed as technology has advanced at a much quicker rate. Current patent rules treat AI software inventions primarily as computer-implemented logical algorithms. While it is true that algorithms are patentable, there is limited guidance on how to deal with intuitive inventions. With today's computer programmes, the underlying programme does not change; instead, the operator just adds more data to the programme to deal with new situations. An AI system's learning experience will allow it to not only expand the program's database, but also to rewrite the core programme itself. Data-privacy and data-ownership problems are another important consideration. Data is accessed and transported numerous times across jurisdictions in a global ecosystem involving various stakeholders. This is especially true when it comes to personal information. Artificial intelligence as a service (AIaaS), which provides access to sophisticated cloud-based AI capabilities, is now being offered by a growing number of large IT corporations and start-ups. Users can produce a wide range of AI outputs with AIaaS without needing to create AI technologies in-house.In terms of IP law, the usage of AIaaS necessitates a shift in the legal analysis' focus from the AI technology's developer to the user (company or individual) who engages the AI system to generate specific output.AI advancements, particularly in the subject of Machine Learning, have paved the way for a slew of new corporate applications. AI has been pushed as a way to speed up drug development because of its ability to discover hidden patterns in vast data sets and automate many predictions.The three main international treaties in the field of copyright (Berne Convention, WCT, and TRIPS) require contracting states – currently 179 countries, including all EU Member States – to provide international protection to eligible authors of "works" in accordance with the treaties' minimum standards. The Berne Convention, on the other hand, exclusively imposes responsibilities on member states.In the execution stage, the AI system has taken over much of the human author's job; nevertheless, this does not mean that the user is completely passive. The user's role is critical, especially in supervised DL systems, in constantly evaluating the output of the process and providing feedback to the AI system.A largely autonomous AI system could qualify as a work protected under copyright law if it was launched and imagined by a human being, and the AI-assisted output was then redacted in a cohesive way. That is, copyright protection could be achieved simply through human interaction throughout the conceptualization and transcription stages.Various enablers are being developed across organisations to support IP management activities, depending on their needs. NLP approaches are used by virtual assistants for previous art search to refine search tactics by offering associated terms from related themes or concepts, as well as search results based on semantic similarities.

Challenges in using Artificial Intelligence for Intellectual Property Management

Naming the inventor is merely a formal requirement that a human being be named as inventor. Artificial intelligence systems do not have the legal status of a person (i.e. legal personality), and they cannot be named inventors. There is no agreed-upon procedure for dealing with this.A large volume of reliable data is critical for improving the accuracy and dependability of the AI system. Collaboration and multilateralism's role are crucial. On a logical level, having free access to data is critical.AI frequently operates in a "black box" that is unfathomable to humans. Due to the different approach that machines take to reducing errors to the maximum extent possible this makes it very difficult for an applicant to meet the disclosure requirement if he doesn't know what he's doing is unable to explain how the innovation works so that a technological solution based on the specifications can be developed.

It is a huge problem to build AI capabilities across IP offices. Although AI has been around for a while, it has only now emerged as a viable technological option. The number of people with the necessary training and understanding in this industry is inadequate, making in-house AI capability difficult, especially in the face of contest against better-resourced, higher-paying private firms.Micro IP agencies are bound to experience some difficulties. AI relies on information and algorithms, and smaller offices, by definition, have access to fewer sets of data. This creates a volumetric constraint, which forces the design and implementation of AI applications in larger offices. It is less efficient in micro offices where application importance is still manageable. Open access to data linked with IP registrations for patents, trademarks, and designs is a widely acknowledged norm in the IP field. It will benefit smaller IP offices, which can, in theory, access these data. Overcoming these obstacles will necessitate a stronger focus on integration and synchronisation. (ARTIFICIAL INTELLIGENCE'S ROLE IN THE FIELD OF INTELLECTUAL PROPERTY, 2020)

When third-party companies demand relevant data sets in order to define themselves in the industry or get appropriate rights over the solution, many Software engineers confront challenges. Acquiring intellectual property rights over comprehensive technologies ensures that possession and licensing become paramount, eliminating the need for third-party involvement where Software companies pay for a license to obtain data sets, and Intellectual property rights ensure that Tech companies collude with collaborators to protect their software initiatives.

Another challenge of using AI for intellectual property management is of Legislation. For patented Artificial intelligence discoveries to be recognized legally, IP laws must be regularly updated. There have been significant changes observed by the IP industry and the complexities that new innovations and their proprietors face, situations that alter the prospective of the sector and necessitate policy changes so that rightful owners can copyright their inventions. If there are gaps between Intelligence and IP, there will be no harmony amongst AI inventions and IP laws. There is an ongoing need to build forums that deal solely with AI and IP problems.

Challenge of client data, clients who need the assistance of certain training datasets to function in harmony with the vendor's program to adjust to clients' business services are provided with efficient learning database authorization by the vendor. Challenges occur when an error happens in the cyber security system of the client's application code provided by the vendor, which frequently raises the issue of property or patents. If the clients seek to resell the technology to some other provider, they will face additional legal problem.

Contract disputes, previously AI employed specialised computer hardware that reproduced the same activities of a human mind, but today software visual modules are applied, leading to an increase in the utilisation of processors. As a result, IP-related issues emerged beyond the realm where technologies other than the aforementioned pieces were employed. Corporate deals confront difficulties when there is no section in the contracts stating the newest evolving software, covering ownership and license issues. All critical provisions including new IP development software or indemnity connected to 3rd party authorisation must be included in contracts.(Artificial Intelligence and Intellectual Property Rights, 2020)

Is Intellectual Property Law Equipped for the Age of Artificial Intelligence?

The notion that Artificial Intelligence (AI) will modify the law is now banal and self-evident. This in itself describes the incapability of the present day IP law to deal with artificial intelligence. The distinct challenges discussed in the previous section will continue to be a source of consternation for multinational enterprises, administrations and lawmakers alike, as well as potentially impacting the destination of the next generation of AI developments. There are a slew of other factors to consider when it comes to patenting AI technologies and their suitability.

Should AI technology be designated as the creator of a patent under intellectual property law? Or should it require that only people be innovators in order to eliminate uncertainty in the ownership of the discovery? Should the law regulate how inventions are seen if the legal provisions believe that the latter is the most appropriate regulation? These are some important questions that are yet to be answered. Though IP law is not yet equipped to deal with AI, a continuous discussion on the these issues will enhance and challenge our present knowledge of intellectual property law as we prepare for the disruptions, AI inventions may make to present IP rules.

Analysis of Some Important AI Indices on IP Law
AI Indices makes an annual endeavour to assess the most important trends affecting the AI industry, innovative research, and AI's social impact.

ARTIFICIAL INTELLIGENCE REPORT BY STANFORD UNIVERSITY ON HUMAN-CENTERED ARTIFICIAL INTELLIGENCE

The AI Index Report keeps track of, collects, distils, and visualises artificial intelligence-related data. Its purpose is to give unbiased, extensively validated, and globally sourced data to policymakers, academics, executives, media, and the public at large to enable them form opinions regarding the challenging subject of AI. (Artificial Intelligence Index Report, 2021)

Highlights of the Report

- Research and Development - From 2019 to 2020, the number of AI journal papers increased by 34.5 percent, a substantially greater rate than from 2018 to 2019. (19.6 percent). Academic institutions produce the majority of peer-reviewed AI publications in every major country and region. However, distinct European Union member states are the second most important originators (17.2 percent).China (20.7 percent) passed the United States (19.8 percent) in terms of the highest share of AI journal citations in 2020 for the first time, while the European Union continued to lose total share.The number of AI conference papers climbed fourfold between 2000 and 2019, albeit the trend has slowed in the last ten years, with the number of publications in 2019 just 1.09 times greater than in 2010.
- AI Patents - In the last two decades, the total number of AI patents published around the world has continuously increased, rising from 21,806 in 2000 to more than 4.5 times that, or 101,876, in 2019.Only 8% of the dataset in 2020 includes a nation or regional association, indicating that the AI patent data is incomplete.Between 2015 and 2020, the number of papers in Robotics and Machine Learning in computer science increased by 11 times and 10 times, respectively, among the six topics of research connected to AI on arXiv. In 2020, cs.LG and Computer Vision (cs.CV) will dominate the overall number of patent publications in 2020, with 32.0 percent and 31.7 percent, respectively.
- In 2019, global private AI investment totaled more than $70 billion, with $37 billion invested in startups, $34 billion in mergers and acquisitions, $5 billion in IPOs, and $2 billion in minority stakes. Autonomous vehicles received the most funding ($7 billion) in the previous year, followed by medication and cancer research, facial recognition, video content, fraud detection, and finance.
- The paper also highlights examples of AI systems performing at human levels, such as DeepMind's AlphaStar defeating a human in Starcraft II and deep learning identification of diabetic retinopathy in eye scans.
- The AI Index Report ponders upon the Indian plan focuses on both economic growth and ways to use AI to enhance social inclusion, as well as study into crucial AI-related concerns including ethics, bias, and privacy.In 2019, the Ministry of Electronics and Information Technology proposed establishing a national AI initiative with INR 400 crore in funding (USD 54 million). In late 2019, the Indian government launched a committee to advocate for a well-organized AI policy and to define the precise functions of government organisations in order to further India's AI agenda with funding of INR 7000crore (USD 949 million) as on December 2020 conversion.

- The industrial strategy of the United Kingdom emphasises a strong alliance between business, academic institutions, and government, and identifies five underpinnings for a productive industrial strategy: becoming the world's most innovative economy, generating employment and higher earning potential, infrastructure improvements, and so forth. The Select Committee on AI in the United Kingdom published an annual report on the country's development from 2017 to 2019. The administration will announce its plans in November 2020 announced a significant boost in defence spending of $1 billion.
- The American AI Initiative emphasises the need of the federal government investing in AI research and development, lowering barriers to federal resources, and ensuring technical standards for the safe creation, testing, and deployment of AI technology. The White House also highlights the development of an AI-ready workforce and demonstrates a commitment to working with international partners while supporting AI leadership.

Methodology

1. Each large topic area in AI Policy and National Strategy is organised around a set of underlying keywords that explain the publication's content.Health & Biological Sciences, Physical Sciences, International Affairs & International Security, Energy & Environment, Social & Behavioral Sciences, Ethics, Public Administration, and other topics that dominated AI discourse in 2019-2020.
2. Ethics in AI has been designed Ethics-related words are searched for in the titles of papers in flagship AI, machine learning, and robotics conferences and journals to get a sense of how extensively Ethics in AI is discussed.The classic and trending keyword sets were created by curating terms from the most often referenced AI book, Russell and Norvig [2012], as well as the keywords that appeared most frequently in paper titles through time in the venues.
3. In respect of AI and Economy, the survey conducted by McKinsey was undertaken by the poll was performed online from June 9, 2020, to June 19, 2020, and received responses from 2,395 people from all over the world, representing a wide range of geographies, industries, firm sizes, functional specialties, and tenures. Of those that responded, 1,151 claimed their companies had implemented AI in at least one function, and they were questioned about it.The data are weighted by the contribution of each respondent's country to global GDP to account for disparities in response rates. In addition, the industrial strategy of the United Kingdom emphasises a strong alliance between business, academic institutions, and government, and identifies five underpinnings for a productive industrial strategy: becoming the world's most innovative economy, generating employment and higher earning potential, infrastructure improvements, and so forth. The Select Committee on AI in the United Kingdom published an annual report on the country's development from 2017 to 2019. The administration will announce its plans in November 2020 announced a significant boost in defence spending of $1 billion.

4. The American AI Initiative emphasises the need of the federal government investing in AI research and development, lowering barriers to federal resources, and ensuring technical standards for the safe creation, testing, and deployment of AI technology. The White House also highlights the development of an AI-ready workforce and demonstrates a commitment to working with international partners while supporting AI leadership.

GOVERNMENT ARTIFICIAL READINESS INDEX BY OXFORD INSIGHTS

With the help of the International Development Research Centre (IDRC), Oxford Insights improved the approach and expanded our scope to include all UN countries in the 2019 Government AI Readiness Index (from the previous group of OECD members).

It assigns a score to 194 nations and territories based on their readiness to deploy AI in public service delivery.The overall score is made up of 11 input variables that are divided into four categories: governance, infrastructure and data, skills and education, and government and public services.A quantitative toolkit that may be used to assess a government's readiness to employ AI is Government Artificial Readiness Index. The Index takes a wide range of information and distils it into a single figure, including desk research on AI strategy, Crunchbase statistics on AI firms, and UN indices. This makes it easier to make worldwide comparisons and track a government's progress.(Government Artificial Intelligence Readiness Index, 2019)

Highlights of the Report

1. Singapore tops the list for AI preparedness, with Western European nations, Canada, Australia, New Zealand, and four more Asian economies rounding out the top 20. In the top 20, there are no Latin American or African countries with China handling the lowest position at 20th.
2. The Government AI Readiness Index takes a global look at AI and offers results that are compatible with other technology indicators in Africa. The prospects for AI in Africa are optimistic, as institutional research centers and informal developer groups are both showing interest in the field.
3. The biggest firms and governments that are willing to invest extensively will get the most rewards from AI. While the focus has so far been on investment in AI adoption, these governments will need to do much more to prepare their society to both benefit from and avoid the possible disruptions caused by AI growth.Strong cross-border academic collaborations between China, Singapore, and Australia would aid the region's progress in AI research, both basic and application-driven.
4. The low number of AI companies in Australia compared to other nations hinders the country's position, since many Australian entrepreneurs travel overseas for good prospects and funding. New Zealand's ongoing excellent performance in the Index is contingent on the country's government developing an artificial intelligence strategy and action plan.

Methodology

1. The hypotheses devised making a government ready to use AI in public delivery a well-coordinated national AI strategy is a solid indicator of the effectiveness of AI-focused government. Data is the foundation of artificial intelligence systems. A government that is AI-ready will demonstrate both strong political will and competence to push for innovation, as evaluated by efficacy proxies and the degree of innovation currently in place through digital public services.
2. To evaluate a government's AI-related ambition, regulations, and moral coupled with frameworks, all of which are essential prerequisites for pervasive AI implementation in public service delivery, a structure of high-level 'clusters' containing descriptive statistics or proxies for measuring government AI readiness was developed.(Government Artificial Intelligence Readiness Index, 2019)
3. To make the scores for each country comparable, the data sets for each indicator were normalized between zero and one. We combed the Crunchbase database for AI startups. To reduce the effects of this, the scores were given a logarithmic scale (base 10) before being normalized to give a more accurate picture of the relative intensity of private sector capacity in each country.To get our final scores for government AI readiness, we put the figures for each indication together. We chose to give each indicator the same weight.

THE GLOBAL AI INDEX (GAII) BY TORTOISE MEDIA

The GAII was the first to rate countries based on artificial intelligence ability, specifically by measuring investment, innovation, and implementation levels. Tortoise has worked to broaden the index's coverage and analyse the global landscape in areas such as talent, infrastructure, operating environment, R&D, commercial initiatives, and government policy.(Global AI Index, 2019)

Highlights

1. As per a new index by Tortoise Intelligence, over 10,000 artificial intelligence (AI) companies have been formed since 2015, attracting $37 billion in private funding, and thousands of additional software developers have been drafted onto AI projects internationally in the last three years as demand for the technology grows.
2. Tortoise Intelligence analysis indicates that after the Canadian government released the first national AI policy in 2017, at least 30 more countries have done the same. In just four years, the number of AI businesses has doubled, with around 20,000 currently working on everything from self-driving cars to illness detection systems. Last year, a total of $26 billion was invested in AI companies, up from $7 billion last year.
3. Britain is ranked third attributable to a thriving AI talent pool and a strong academic reputation. DeepMind, a business created in 2010 that was purchased by Google four years later for $500 million, is one of the most successful AI businesses to emerge from this country.
4. Countries employ AI in a variety of ways. Russia and Israel are two countries that are concentrating AI research on military applications. Japan, on the other hand, is heavily reliant on technology to deal with its ageing population.
5. According to the Index, the United States is the unchallenged leader in AI development. As a result of the quality of its research, skill, and private investment, the western giant scored nearly twice as high as China, which came in second.
6. According to the GAAI Index, China is the fastest-growing AI country, having surpassed the United Kingdom on criteria ranging from code contributions to research publications in the last two years. China filed 85 percent of all facial recognition patents last year.

Methodology

1. To define and explain an underlying, multifaceted idea, the Global AI Index employs a number of interconnected measurements. This notion is referred to as 'capacity for artificial intelligence' in The Global AI Index, and it is defined as a collection of interconnected factors that fall under the areas of innovation, implementation, and investment.The three major pillars of the Global AI Index are investment, innovation, and implementation. Commercial ventures and government strategy are two sub-pillars of the investment pillar. Research and development are two sub-pillars of the innovation pillar. Finally, there are three sub-pillars in the implementation pillar: talent, infrastructure, and operating environment.
2. The Global AI Index is organised around the concept of capacity, which is defined as the amount of whatever a system can hold or produce. It's a good way to think about the interaction between the various relevant components that exist within a country.Artificial intelligence capacity refers to both the breadth and depth of adoption - a quantitative factor - and improvements in a country's ability to operate and sustain AI systems in a productive, safe, and equitable manner - a qualitative factor.
3. Only one of the sources used for The Global AI Index is proprietary. The great majority of the sources utilized for The Global AI Index are publicly available and open source. The Crunchbase API was used to gather data for the 'Commercial Ventures' sub-pillar.
4. The weighted normalized sum of a country's sub-pillar scores determines its total score. The normalized weighted sum of all the indicators inside a sub-pillar is then used to get the score for that sub-pillar. Rather of comparing all individual indicators, we might compare indicators inside a certain sub-pillar, such as talent.

US CHAMBER INTERNATIONAL IP INDEX

It is more vital than ever before to be able to quantify how well equipped economies are to produce and protect innovation and creativity, according to the International IP Index. The International IP Index compares the IP framework in 53 worldwide economies using 50 distinct metrics. India had been rated 40 out of the 53 countries globally with areas of weaknesses recognised as strict registration requirements, for example, are a barrier to licensing and technology transfer. Patentability restrictions outside of international standards provide a limited framework for the protection of biopharmaceutical IP rights. The report also observed that in the ninth edition, India's overall score dropped slightly from 38.46 percent (19.23 out of 50) in the eighth edition to 38.40 percent (19.20 out of 50) in the ninth edition. This represents a slight drop in indication 32 score.

Methodology

Baseline values, metrics, and models are used in the Index. These principles are based on national and international best practises in terms of protection, enforcement mechanisms (both de jure and de facto), and/or model pieces of primary and secondary legislation.Where international law or treaties do not provide adequate baselines, the baselines and values employed are based on what rights holders consider to be an appropriate environment and degree of protection.The total score of the Index runs from a minimum of 0 to a maximum of 50, with each indicator scoring between 0 and 1. With three different ways to score indicators: binary, numerical, and mixed. When an indication is binary, it is assigned either the value 0 if the IP component does not exist in a given economy or 1 if the IP component does exist in a given economy.The Index assigns a score based on both qualitative and quantitative data. This evidence is taken from a variety of sources in order to present as full a picture of an economy's IP environment as feasible With all of the sources used are freely available and open to the public.

Overall Analysis

- Illegal actions are notoriously difficult to accurately measure and quantify. Estimates will be based on characteristics such as physical seizures and questionnaires by necessity. This is evident in the number of online piracy.Rates of piracy and counterfeiting are either specific to one or handful of economies or are worldwide and do not provide data at an individual economic level. The result is a relative shortage in the number of studies that quantify and compare levels of piracy and counterfeiting with a sample of economies sufficient to make large scale comparisons empirically reliable. Thus measuring counterfeiting and Piracy with the indicators and baselines used by various companies are not expected to protrude reckonable measures in conformity to Intellectual Property Rights.
- Finding high-quality datasets that cover as many nations as feasible is a difficult task. A comprehensive search for better indicators or proxies to capture the parameters being measured is underway. In the absence of a better option, the corporations were forced to rely on less comprehensive but high-quality databases.
- IP rights that are transparent and predictable have created the legal and economic foundation for an unprecedented number of very successful cooperation between government, industry, academia, and non-governmental groups, which have mushroomed globally.There's a chance that indices like these will spark a worldwide race for AI. Higher ranks are dominated by countries from the Worldwide North, highlighting the danger of countries with a history of sponsoring scientific and technical research and development solidifying their global dominance.

- When it comes to intellectual property rights, one concept that users are unwilling to accept is the idea of a technology with the ability to think creatively. AI also has a number of other technical capabilities that have immediate ethical implications. Delving into the methodology of the AI Indices, internally developed software/ machine learning technologies trained with circuitous algorithms were used to create advanced hierarchy classification models for analysing the unstructured predictive models. Reviewing the Global Intellectual Property system, with the prevalent conundrum of first to file and first to use debate; unique indicators facilitating and promoting licensing and technology transfer would be not proficient enough to trace the national Intellectual Property frameworks governing the particular country.
- Antiquated Machines functioned under rigid and austere parameters, and while reaching to disparate conclusions based on similar or slightly different facts, it was feasible to forecast all possible future events and judgments if the computer's original coding and the information intake were designed in accordance to the intention of the users. With the current bolster of importance of Intellectual Property Rights and Artificial Intelligence; the figures of cyber theft and terrorism is ascending exponentially. For rights holders operating in worldwide marketplaces, enforcement against IP theft continues to be a concern with the indices not stressing on the indicators where the custom actions taken by the legislative machinery of the particular governments and lack of transparency measures seeking to detain and prevent such occurrences with stringent legal measures.
- The power of the results suggesting assertions is dubious, given that both the Index and the Intellectual Property are unique and constantly evolving instruments assessing the state of the international IP environment, with the national scheme constantly amending and revising in accordance with the dynamics of the country with the contribution of geographic diversity.
- In the light of COVID -19 pandemic; many technology-based companies and IP-intensive industries are feeling the impact of the pandemic's ramifications, whereas certain pharmaceutical companies are prospering in the drug and essential medicine supplies whilst still facing repercussions and hindrances to compulsorily license and patent their creations; the automatic statistics and indicators would be skewed and distorted.

SUGGESTIONS ON EVOLVING AN AI ETHICS INDEX

Artificial Intelligence has already sparked a revolution. It has the potential to improve the lives of people. However, it would be naive to dismiss concerns about a lack of AI ethics and risk assessment. Because of the public's overwhelming faith in AI, unethical use of AI can result in horrifying consequences. Many complex operations, including hiring, medicinal chemistry, decision-making, etc, are already being automated by technology. Artificial intelligence has proven to be so dependable that judges and attorneys are utilising it to establish law and order. When AI takes over power at breakneck speed, we must be prepared to cope with the ethical issues that it poses.(From Inclusion To Influence: How To Build An Ethical AI Organization, 2021)

Asking modern day organisations to stop the adoption of artificial intelligence is not an option. Transparency, governance, and access to remedy are just a few of the instruments that will aid in holding algorithms accountable and therefore making their use ethical. This necessitates a thorough and comprehensive annual evaluation of AI Ethics. Some suggestions for evolving an efficient AI ethics index are listed below:

1. A quantitative depiction of algorithmic progress impacting national IP environments' strength and several aspects of economic activity, including asset prices of spending R&D investment, innovation, technology creation, and creativity can all be improved by combining intelligent data protection and data analysis with privacy-preserving solutions that conceal the identities of those who divulge the statistics.
2. Innovation Competence Model can be devised beyond the factual control of parameters with optimization of contours of productivity presaging the correlation of creative outputs; extrapolating the persisting trends in the Intellectual Property trends by assessing the algorithmic efficiency by slender accumulation of data rather than a surveillance manipulating the outcomes.
3. Training AI Models for a broad elimination of liability of negative aggregated results, to include several international trade agreements have concluded substantial IP provisions, to devise predictable and transparent rule of law, and the use of industrial policies can be undertaken by considering indicators of average rates of top performing economies with efficiency benchmarks defining clear set of directives for accountability.
4. The long standing issue of counterfeiting should be detected and including while developing an interconnected measure to eliminate anomalies by detecting deviations from the existing model governing the shifting sales, renewable periods of creation in the economies, unpublished sensitive information of the business enterprises, etc.

Conclusions

Artificial intelligence (AI) is often recognised as one of the most significant technology of our time. Recent advances in artificial intelligence (AI) are generating commercially important applications across a wide range of industries and professions. Machine learning, picture and audio recognition, language processing, and data analytics are examples of technological innovations that have enabled computers to match, if not outperform, human abilities in specific fields. The nature of the consequences of AI on intellectual property rights, on the other hand, is unfavourable. Artificial intelligence-induced losses in traditional creative (copyright) or R&D-related (patent) areas may constitute a threat to society.

Data and algorithms create various fundamental IP-related challenges, such as how to create intellectual rights in a constantly changing algorithm. Globally, demand for intellectual property rights continues to outpace economic growth rates. The IP system, as it is known, is not going out of style. However, new difficulties are emerging, which may necessitate the inclusion of an extra layer of IP rather than the replacement of the present system. The incapacity of current intellectual property laws to deal with AI-induced losses in the copyright and patent areas necessitates a close examination of Intellectual Property Rights. Also it necessitates a rigorous annual assessment of AI's current state. That's where the AI index comes into the equation, which covers autonomous systems, artificial intelligence research and development, the AI industry, public perception of AI, and, most crucially, technical performance.

In the next few years, AI systems will become incredibly valuable in IP administration. AI solutions for day-to-day IP management activities are already proving useful to IP strategists. However, as artificial intelligence advances, it will become more difficult for IP portfolios to handle such large databases, and it will become more difficult for strategists to fill the gap between tech and security. Over time, the IP sector has acknowledged the issues and has updated their strategy to respond to AI discoveries in order to find a position within this system. Despite the challenges, it would be fascinating to see how intellectual property laws evolve from here to incorporate artificial intelligence.

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