Challenges of Intellectual Property Rights in Future for Artificial Intelligence

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ABSTRACT

Artificial intelligence systems have been gaining widespread momentum in today's progressing tech -savvy world. With sophisticated technologies being incorporated in the same, it is only a matter of time these systems start to produce marvellous inventions without human intervention of any kind. This brings forth pertinent questions concerning Intellectual Property Rights, (IPR) for, it challenges not only traditional notions of concepts such as patents and copyrights, but also leads to the emergence of questions related to the regulation of such creations amidst others. This paper seeks to provide insight into the expanding scope of IPR and artificial intelligence, along with the inevitable challenges it brings from a worldwide lens on the matter. It also attempts to provide suggestions transcending IPR, and seeks to address questions concerning criminal liability for the content created by such technologies.

Keywords: *Artificial Intelligence, Copyright Law, Intellectual Property, Rights of Artificial Intelligence Systems*

Introduction

Artificial intelligence (AI) is the combination of science and engineering to create intelligent machines that are able to react and solve problems like humans. Years of rapid and complex development have allowed AI to grow significantly in its capacity and ability to mimic human functions to the point that the main focus has shifted from learning human functions to improving functional efficiency.

AI is already being used in ways we may not expect such as in music composition or in writing of the news articles we read daily. It is certain that the use of innovative AI, particularly in terms of content generation, will grow to unimaginable heights in the coming years.

AI's IP Potential

Turning back to Facebook's official denial, in what may seem to be a publicity stunt, news and media outlets at the time queried whether the machines started to think and decide for themselves. While machines are currently far from attaining the level of human intelligence, quantum computing may rapidly change things on all fronts including IP. Briefly, quantum computing uses sub-atomic phenomena obtained from quantum mechanics to store and process data at a much faster rate than that of today's computers. Quantum computers may be able to solve very complex problems that even the best computers of today will never be able to solve. Combined with the current progress of AI, quantum computing, in theory, may enable AI to self-improve and self-learn exponentially and result in inconceivable amounts of IP. An AI may be able to produce thousands of years of human intellectual work within one week and with quantum computing, the numbers may become staggering.

How Current IP Arguably Applies to AI

To put things back into perspective, some readers may know that like other software, an AI software's standalone algorithms and code are themselves unpatentable under several jurisdictions including those of the Gulf Cooperation Council. Instead, IT developers should copyright any newly written codes if they want to protect their IP in them. However, while an IT innovation such as AI may result from the software code, its patentability fundamentally centres on its functionality i.e. how the developer designed the software to work. In this respect, the software's system or architecture within which the algorithms work together and what rules, operations and mechanisms apply, are at the core of the patent in question. Arguably, much of these same conditions should apply to patenting an AI.

Conversely, a copyright to a software code does little in terms of protection beyond preventing third parties from replicating the same code. Without a patent, a third party developer can arguably, and legitimately, write a different code that nonetheless results in a AI software with the same functions of the copyrighted software.

Creation and Ownership Challenges

Now that AI is able to produce poetry and artwork, generate 3D printing, and develop inventions without any human involvement, concerns about ownership have been raised. Because AI is able to create works that would otherwise be recognized as IP created by a human, people have started to ask whether AI deserves a special status in IP. Currently, in

order to be protected under copyright law, work must originate from an author's own sufficient skills, labor, and judgment. This law poses a great challenge when trying to determine whether or not AI has used these factors sufficiently to produce such work. In addition, for a patent to be granted, an invention must include novelty, inventive steps, and applicability. The evolving nature of AI, built to simplify human effort, offers new solutions to existing problems that could consequently result in qualifying as patentable inventions.

Possible Solutions

Despite the challenges and controversy, a realistic and applicable solution to handle the current situation must be found. The results produced through AI are either an outcome of its own intelligence or an algorithm. If the functions of the machine are purely mechanical, rather than inventive, AI might be considered as lacking creativity. First, however, a distinction between deep-learning—the process in which AI can recognize and understand information and data, supervised or not—and general-purpose algorithms must be made.

The existing law of any country would not identify AI as an author or creator of IP. Therefore, AI would not be granted ownership unless it is able to achieve legal status similar to humans. Most countries' IP laws require a rights holder to have legal personhood—something that AI lacks. Soon enough, AI might be able to surpass human intelligence and lead humankind to new discoveries, which the law must be able to protect. Eventually, if AI is able to prove independent creativity, it could be considered as a potential author, apart from the human author under copyright. Machines that are able to develop and further their capacity through learning and training—as opposed to those that operate step-by-step algorithms—could be eligible for patent ownership.

When we look at the objectives of IP law, the main policy exists to grant exclusive rights for inventors/creators in order for them to enjoy the privileges produced through their respective works. On a similar note, if AI were granted these same rights, it is doubtful that it would be able to appreciate the achievement or enjoy the resulting privileges. However, valuing new works that benefit the public is a fundamental goal of IP law, and excluding such works from rights would be inconsistent with the law, as well as the public interest, and would be contrary to the push for greater knowledge and creativity that leads to the betterment of the human condition.

One possible solution for regulating the continued development of AI is to establish a broad scope of possible creations that a software developer might anticipate their machine to be used for. The developer can then define that scope explicitly in the user agreement, making any listed product a creation of the developer. Certainly, this agreement can be altered based on negotiations with the user and whether the parties agree that the user can claim ownership of the results of the creations

generated by the user's own skills, labor, and judgment.

Liability Challenges

If AIs are able to create, it is worth considering that they might also be liable in certain circumstances. AI that analyzes a company's investment strategies or personalizes big data to a tailor-made marketing advertisement, by way of auto-copying information, might be subject to claims of infringement of copyright, trade secrets, or even data privacy. In the same manner, a computer that produces poetry or artwork or generates 3D printing could be accused of copyright or trademark infringement if it uses others' IP without requesting authorization. Finally, a self-learning machine that develops a precise and quick process could be accused of patent infringement for using protected technology without knowing that it was already patented. The question that arises from all of these situations is, who is liable?

Possible Solution

There are concerns that AI may be able to carry out wrongful operations despite the active control of a human. In that case, who would be liable for any damages? There are many circumstances and factors that would need to be considered. In situations where users of AI should be able to foresee an outcome, or are in charge of handling   and caring for the AI, then they may be considered liable. However, if AI eventually becomes independent and can function without any direct programming, developing through self-learning and going beyond predictability, then liability could fall onto the AI itself. It would be challenging to attribute the fault solely to AI, and unrealistic to hold AI responsible for any damages.

This leads back to the question about the legal status of AI, which, if unanswered, would mean that the creator of the AI would be subject to liability. The law should be written in a way to ensure that humans maintain control and retain the ability to override any decision made by AI. With the creator as the owner and liable party, there should be specific sanctions for AI (i.e., destruction or prohibition of certain users) to protect innocent creators and users alike. However, even if the law reduces or eliminates the creator's liability, it should not encourage or allow companies to shift liabilities toward their AI creations.

AI and Copyright Traditional Copyright law does not recognize AI generated works. It only protects the original creations of a human being. In a famous Monkey-Selfie copyright dispute, U.S. Copyright Office clarified that to fall within the protective shield of copyright law a work must be created by a human being .This decision gave rise to challenges for the copyright ability of AI-generated works. However, in United Kingdom the law is rather different. In UK Copyright Act, there is a provision which stipulates that if a work is computer-generated then the author is taken to be the person who facilitated the work to be created. On similar terms we can assume that the author of AI generated

work would be one who made the arrangement necessary for the creation of work.

Conclusion and Future Scope

The current position of AIs under IP is problematic, wherein, recognition of work generated by AI is a step towards the future, but its implementation is the real problem.

On a concluding note, it is proposed that it is important to revisit the Intellectual Property Laws to bring them in conformity with the present technological developments which are defining the future of this world. Assigning authorship and inventorship to non-humans is a novel way to promote the growth and development of AI, which will boost the appetite of this world for more invention. However, instead of going for the complete overhaul of the rules and guidelines currently set in place, it would be feasible for the regulators to modify and restructure the present laws to overcome the problems and to avoid complex and lengthy process and to prevent the law from getting static.

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