



## Osmania University Journal of IPR [OUJIPR]

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Vol.1 | Issue 1

July 2023

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Pages: 51 – 67

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#### **Recommended Citation**

V. B. Malleswari, 'Patenting AI-Generated Works and its Legal Implications – with special reference to India' (2023) 1(1) OUJIPR, 51 <<https://ouipr.in/oujipr/vol1/iss1/3>> accessed [date]

Available at: <https://ouipr.in/oujipr/vol1/iss1/3>

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# Patenting AI-Generated Works and its Legal Implications – with special reference to India

- V. B. Malleswari<sup>1</sup>

## Abstract

*Artificial intelligence refers to the cognitive abilities displayed by machines. This includes the ability to learn from data in the form of algorithms, analyze and solve problems, draw inferences from situations and act accordingly. Despite being a product of human intellect, AI is capable of creating its own works, such as the text generator Chat GPT or the image generator DALL-E. Human creative works are protected under Intellectual Property rights, which includes AI. This raises questions about whether AI-generated works should be protected and whether patents can be granted to AI as an inventor. These questions have become increasingly relevant since 2020 due to advancements in technology. Recently, South Africa granted a patent to the AI-generated work 'DABUS', which is capable of generating inventions. This has sparked global debate as other countries do not agree with patenting AI works. This paper explores these issues in relation to India's position by critically examining the provisions under the Patents Act 1970 and suggests that AI should always be supervised and controlled by humans and should not be considered an independent legal entity.*

Keywords: Patents, Inventions, Artificial Intelligence, Chat-GPT

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## Introduction

Technology is the application of scientific knowledge and includes computer systems, which involves software, hardware, and communications for storing, sending, and retrieving data. As a result of advances in technological development, artificial intelligence (AI) has evolved. John McCarthy first used the term “*artificial intelligence*” in 1956 to refer to a machine that could mimic human cognitive functions.<sup>2</sup> The

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<sup>2</sup> Kathleen Paisley and Edna Sussman, 'Artificial Intelligence Challenges and Opportunities for International Arbitration' (2018) 11 NYSBA <<https://sussmanadr.com/wp-content/uploads/2018/12/artificial-intelligence-in-arbitration-NYSBA-spring-2018-Sussman.pdf>> accessed 1 January 2023.

theory behind the development of intelligent machines is machine learning, a subset of AI; and by utilizing enormous amounts of data and algorithms, deep learning, a subset of machine learning, teaches computers to mimic the behaviour of the human brain. Cognitive skills of AI include ability to learn from data, to analyze and solve problems, to draw inferences from situations, by reasoning and processing data.

AI can be categorized based on its capabilities. *Narrow AI* performs specific tasks only, while *General AI* exhibits human-level intelligence in understanding, learning, and performing tasks. *Machine learning* falls under the purview of AI, that examines data to make forecasts or decisions without the need for explicit programming. *Deep learning*, a subset of machine learning, utilizes artificial neural networks to perform tasks like speech and image recognition. *Reinforcement learning* is another subset of machine learning where the machine learns through trial and error and reacts in a certain environment, such as online chess games. *Natural Language Processing* enables machines to comprehend, interpret, and produce human language, like ChatGPT and DALL-E. AI is currently transforming many industries, and by 2030 it is expected to contribute \$15.7 trillion to global economy.<sup>3</sup> Today, AI technology is pervasive in all facets of our lives, and India is third, behind the USA and China in the global adoption of artificial intelligence.<sup>4</sup>

## **Artificial Intelligence and Intellectual Property Rights**

Intellectual Property Rights (IPR) like Patents, Copyrights, Trademarks, Trade Secrets, Industrial Designs, Geographical Indications refer to legal rights granted to persons that include organizations, for their cognitive creations in the form of intangible assets such as technological innovations, artistic, literary, music and dramatic works, designs, symbols,

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<sup>3</sup> Pumplun, Luisa, Tauchert, Christoph and Heidt, Margareta, 'A new organizational chassis for artificial intelligence - exploring organizational readiness factors' (2019) 27 ECIS ISBN <[https://aisel.aisnet.org/ecis2019\\_rp/106](https://aisel.aisnet.org/ecis2019_rp/106)> accessed 1 January, 2023.

<sup>4</sup> Rishi Iyengar, 'These three countries are winning the global robot race' (*CNN Business*, 21 August 2017) <<http://money.cnn.com/2017/08/21/technology/future/artificial-intelligence-robots-india-china-us/index.html>> accessed 1 January 2023.

names, images etc. The aim of IPR is to encourage innovation and creativity for economic development by providing legal protection to the works of inventors and creators. Until recently, IPR meant cognitive skills of humans, but with the advancement of technology, today human creativity is relying on AI. On the contrary, AI has been evolving without human intervention to such an extent that it is developing its own cognitive works. In this scenario, global debates have emerged as to whether AI can be granted patent as an inventor.

Patents are legal protections given to the inventor for his/her novel and non-obvious invention. It is associated with right to exclude others from making, using or selling his invention for a limited period of time. The main objective is to give recognition and reward the inventor for his creative contributions. For instance, AI technologies have led to invention of Autonomous Vehicles and patents have been filed to AI features like navigation by Waymo, object recognition by Tesla and self-driving systems in Uber.<sup>5</sup> In Healthcare AI based image analysis and personalised medicine applications have been patented. Companies like Google, Amazon and Microsoft have patented Natural Language Processing (NLP) technologies used for speech recognition and language understanding. Under data analysis, AI fraud detection and financial analysis have been patented. Similarly, in Robotics and Automation, robotic arms, autonomous drones etc., have been patented.

There are many challenges in relation to patenting AI generated works such as, to determine the ownership of AI-generated work, who should be considered? whether the person who initiated the AI or the AI who on its own developed certain work without the supervision of human? Also, when AI uses certain data to create inventions, will it amount to infringement of copyright or patent in that data? Intellectual property infringement takes place when someone uses an asset that is legally protected as intellectual property without permission. This can

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<sup>5</sup> Bet Lutkevich, 'Self-Driving Car (autonomous car or driverless car)' (*Techtarget*, January 2023) <<https://www.techtarget.com/searchenterpriseai/definition/driverless-car>> accessed 16 May 2023.

occur in many ways, such as when fake websites pretend to be the official outlet for a brand, when someone uses other's logo on their product to increase sales, or when someone copies and claims other's writing or artwork as their own.

### **ChatGPT – an AI tool**

AI may have played a vital role in the process of invention, yet they should be considered as only a tool. Chat GPT is an AI chatbot developed by OpenAI, a company that conducts research on artificial intelligence with the goal of developing AI that benefits humanity. Founded in 2015 by Elon Musk and Sam Altman, based in San Francisco, OpenAI aims to promote and develop friendly AI.<sup>6</sup> Chat GPT uses advanced technologies like machine learning and natural language processing to produce human-like text and conversation. It has many benefits including cost-effectiveness, automation of tasks, and providing detailed responses for customer service. It can mimic human conversation and has a wide range of applications. However, there are also potential drawbacks such as the risk of plagiarism and the need for fine-tuning. Chatbots may also lack human touch and may lead to miscommunication.

Chat GPT belongs to the Generative Pre-trained Transformer (GPT) family of language models and is fine-tuned for conversational use. The output generated by Chat GPT is not considered an original creation and is not protected by copyright law. However, Chat GPT itself is a software program and is protected under copyright law. To use Chat GPT, permission must be obtained from OpenAI. Recently, OpenAI began geo-blocking access to its Chat GPT AI chatbot in Italy after the country's data protection authority ordered it to stop processing people's data locally due to concerns that OpenAI may be breaching the EU's General Data Protection Regulation (GDPR).

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<sup>6</sup> Kalla, Dinesh and Smith, Nathan, 'Study and Analysis of Chat GPT and its Impact on Different Fields of Study' (2023) 8 IJISRT <<https://ssrn.com/abstract=4402499>> accessed 16 May 2023.

Over 1,100 signatories, including Elon Musk, Steve Wozniak, and Tristan Harris of the Center for Humane Technology, have jointly signed an open letter in April 2023, calling for all the AI laboratories to halt the training of AI systems more advanced than GPT-4 for a minimum of 6 months.<sup>7</sup> AI systems can be used to create patentable inventions and to identify potential IP infringement. Chat GPT is an interesting tool in various domains, including in the realm of intellectual property. Nonetheless, care must be exercised while sharing confidential information with it, as this could compromise novelty or trade secrets. Additionally, copying content produced by Chat GPT could be constituted as copyright infringement, especially if it closely resembles existing works. Since Chat GPT does not cite the source of the information it provides, it may not always be reliable.

### **Protection of AI-Generated Works**

AI generated works can be protected under various forms of Intellectual Property (IP) protection such as:

- *Patent* – Patents can be obtained to protect AI related novel and innovate ideas, methods or techniques.
- *Trade Secrets* – It can be used to protect confidential information such as AI related source code, data sets, confidential and proprietary information.
- *Trademarks* – It can be used to protect a particular brand name and logo of AI technology.
- *Copyright* – It protects works of authorship like books, movie, drawings where the person can become copyright owner who initiated AI to create work. Here AI will be considered as a tool only<sup>8</sup>.
- *Limit Access* – Protection can be done by limiting the access to AI related knowledge, for instance if only authorized employees and contractors are given access to AI technology only after signing

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<sup>7</sup> IBL News, 'Italy Bans ChatGPT While Elon Musk and 1,100 Signatories Call to a Pause on AI [Open Letter]' (*ibl news*, 1 April 2023) <<https://iblnews.org/italy-bans-chatgpt-over-a-range-of-risks-while-elon-musk-and-1100-signatories-call-to-a-pause/>> accessed 16 May 2023.

<sup>8</sup> Burylo, Yurii, 'AI-generated works and copyright protection' (2022) *EEL*, 3, 7–13 <<https://doi.org/10.32849/2663-5313/2022.3.01>> accessed 1 January, 2023.

confidential non-disclosure agreements, AI related works and data can be protected.

- *Freedom to Operate search* – It is a process where patent subject matter is searched for issued or pending patent publications so as to determine if a product, process or technology may be infringing on existing patents owned by others.

### **Legal framework on Patentability of AI in India**

Patentability is the ability of an invention to meet legal requirements for obtaining a patent. In India, Patents Act 1970 sets out the criteria and procedures for obtaining a patent. It came into force in 1972 and has been amended several times. The Office of the Controller General of Patents, Designs and Trade Marks (CGPDTM) is the regulatory body for administering the Indian Patent Act along with Patents Rules 2003. The essential conditions of patentability in India are:

- *Novelty* – Section 2(1)(j) of Patents Act 1970, provides that an invention is novel when it has not been publicly disclosed or published before the date of filing patent application.
- *Inventive Step* – Section 2(1)(ja) of Patents Act 1970, provides that invention involves an inventive step if it demonstrates an advancement over existing knowledge or have a non-obvious inventive concept.
- *Industrial Application* – Section 2(1)(ac) Patents Act 1970 says that an invention should be capable of being made or used in an industry<sup>9</sup>.

### ***What cannot be patented?***

Chapter II, Section 3 of Patents Act 1970 provides categories of inventions that cannot be patented in India. They are:

- Any frivolous inventions which are contrary to well established natural laws.

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<sup>9</sup> Patents Act 1970, S.2(1) (ac).

- Inventions whose commercial exploitation is contrary to public order or morality or prejudice to human, animal or plant life or health or environment.
- Mere discovery of the scientific formulation of an abstract theory or discovery of any living or non-living thing occurring in nature.
- Mere discovery of some new form of a known substance, or its new use or process, machine or apparatus unless such known process results in a new product or employs at least one new reactant.
- Mere creation of new substance by admixture of components or mere arrangement or re-arrangement or duplication of known devices.
- Any method of agriculture or horticulture.
- Any process used for the medicinal, surgical, curative, prophylactic diagnostic, therapeutic or other treatment of human beings so as to render them free of disease.
- Whole or some part of plants and animals other than microorganisms including seeds, varieties and species and its biological processes for production or propagation of plants and animals.
- A mathematical or the business method or a computer programme per se or algorithms.
- A literary, dramatic, musical or artistic work or any other aesthetic creation including cinematographic works and television productions;
- Mere scheme or a rule or method of performing mental act or method of playing game.
- Mere presentation of some information.
- Any topography of integrated circuits.
- Any invention of traditional knowledge or which is an aggregation or duplication of known properties of the traditionally known component or components.<sup>10</sup>

### ***What can be patented?***

Patent can be obtained for novelty, inventive and industrial applicability inventions under the following categories:

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<sup>10</sup> Patents Act 1970, S.3.



- *Product Inventions* – Invention related to a machine, device, chemical, pharmaceutical or manufactured product or its composition, structure, configuration which is new and useful is eligible for a patent.
- *Process Inventions* – Inventions related to industrial processes, methods for transforming substances or conducting business activities are eligible for a patent.
- *Computer-Related Inventions* – Excluding mere algorithms or computer programs without practical application, any software related inventions that demonstrate technical effect and solve problems may be eligible for a patent.
- *Biotechnology Inventions* – Those inventions which are novel, new and have industrial applicability related to biotechnology like, genetically modified organisms, pharmaceutical compositions from biological processes, recombinant DNA technology may be eligible for a patent.

### ***Who can be the Patentee?***

In the above context when AI generated works are to be considered for patenting, the first question that arises is as to who can be the owner of such Patent? Under the IPR in India, a ‘*person*’ includes any natural person or artificial person like companies or organizations that are capable of holding rights and obligations. Section 2(p) of Patents Act 1970 defines ‘*Patentee*’ as a person for the time being entered on the register as the grantee or proprietor of the patent. Further, Section 6 of the Patents Act 1970 provides that only person, a human being can file an application for patent. While determining the patentee for AI related works, if the person who initiated the AI gets patent, the cognitive skills exhibited by AI is undermined and if AI itself is made patentee, it is not possible for it to perform its rights and obligations without human intervention. Therefore, the argument that patent cannot be granted to AI sustains.<sup>11</sup>

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<sup>11</sup> Patents Act, 1970.

## Implications of Denying Patent to AI-Generated Works

Steven Thaler, President & CEO of Imagination Engines, Inc. (“IEI”), developed the AI software system DABUS (Device for the Autonomous Bootstrapping of Unified Sentience) and filed two patent applications naming DABUS as the sole inventor. It was rejected by the US Patent and Trademark Office. When appealed before the Federal Circuit, the court analyzed the Patents Act and affirmed that the inventor must be a human being.<sup>12</sup> He filed similar patent applications in the patent offices of Australia, the European Union, Germany and the United Kingdom, which were also rejected on similar grounds.<sup>13</sup> However, South Africa deviated its position from other nations and granted patent to DABUS, becoming the first nation to grant patent to an AI.<sup>14</sup>

In September 2022, the US Copyright Office registered a comic book named “*Zarya of the Dawn*” in which the author Kristina Kashtanova used Midjourney’s AI text-to-image generator.<sup>15</sup> Later in February 2023, it cancelled the copyright registration contending that users are not authors for AI generated works although they must have actively designed the outcome by giving prompts.<sup>16</sup>

Patent enables the inventors to protect their inventions, but refusal to patent leads to lack of commercialization, as competitors may replicate and exploit it. Inventors will be less motivated to create and

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<sup>12</sup> *Thaler v. Vidal* [2022] Fed. Cir. 43 F.4th 1207.

<sup>13</sup> Mark Masutani & Jacob W. S. Schneider, ‘Making the Case for AI Inventorship: Thaler v. Vidal, Case No. 21-2347 (Fed. Cir.)’ (*Holland and Knight IP/Decode Blog*, 7 June 2022), <<https://www.hklaw.com/en/insights/publications/2022/06/making-the-case-for-ai-inventorship>> accessed 1 January 2023.

<sup>14</sup> Andrew Karpan, ‘South Africa Issues World’s First Patent with AI Inventor’ (*LAW360*, 28 July 2021) <<https://www-law360-com.ezproxy.depaul.edu/articles/1407508/south-africa-issues-world-s-first-patent-with-ai-inventor>> accessed 1 January 2023.

<sup>15</sup> Benj Edwards, ‘Artist receives first known US copyright registration for latent diffusion AI art’ (*Ars Technica*, 22 September 2022) <<https://arstechnica.com/information-technology/2022/09/artist-receives-first-known-us-copyright-registration-for-generative-ai-art/>> accessed 1 January 2023.

<sup>16</sup> Carolina Pina, ‘Copyright and AI-Generated Works: Zarya of the Dawn’ (*Garrigues*, 16 March 2023) <[https://www.garrigues.com/en\\_GB/garrigues-digital/copyright-and-ai-generated-works-zarya-dawn](https://www.garrigues.com/en_GB/garrigues-digital/copyright-and-ai-generated-works-zarya-dawn)> accessed 16 May 2023.

innovate in the field of AI resulting in hindering technological advancements. There, would be reduction in the AI research and development, and without sharing of knowledge, it will be difficult for others to replicate successful AI innovations. Ambiguity in ownership and rights over AI technologies would lead to intellectual property disputes among inventors, organizations and users of AI. Also, there would be less or no adherence to industry standards and quality issues, leading to inconsistencies in AI technologies. If there is no recognition or protection given to AI related works, we would not be motivated to initiate AI to create anything new and beneficial to the society. There would be no research and development with assistance of AI, probably losing out on the opportunity of developing worthwhile and life-saving inventions. On the contrary, if AI related inventions are patented, the inventor will get exclusive rights for a maximum period of 20 years, which would in turn initiate companies and individuals to invest in research and development of new AI technologies and provides overall economic growth. Hence, the legal framework for patenting AI generated works and inventions is a debatable topic and is still being developed in India and other countries.

### **International Initiatives on Regulation of Artificial Intelligence**

The sixth edition of the AI Index Report 2023, published by Stanford University, an annual report that monitors, compiles, distils and presents data on AI in a visual format, has revealed policymaker's interest in making legislations on AI with ethical concerns. It provides that since 2016, 31 countries have passed at least one AI related bill and overall, they have passed 123 AI related bills.<sup>17</sup> For instance, Spain passed the "*right to equal treatment and non-discrimination bill*", Alabama proposed "*Artificial Intelligence, Limit the Use of Facial Recognition, to Ensure Artificial Intelligence is Not the Only Basis for Arrest*", Vermont enacted the "*Act Relating to the Use and Oversight of AI in State Government*", Philippines legislated the "*Second*

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<sup>17</sup> Stanford University, *Artificial Intelligence Index Report* (SU Human Centred AI, 2023) <[https://aiindex.stanford.edu/wp-content/uploads/2023/04/HAI\\_AI-Index-Report-2023.pdf](https://aiindex.stanford.edu/wp-content/uploads/2023/04/HAI_AI-Index-Report-2023.pdf)> accessed 16 May 2023.

*Congressional Commission on Education (EDCOM II) Act*". Some significant initiatives in the domain of AI are:

- *The Partnership on AI (Partnership on Artificial Intelligence to Benefit People and Society)* – In September 2016, a non-profit coalition was made by Apple, Amazon, DeepMind, Google, Facebook, IBM and Microsoft to educate public about AI and do research about best practices for Artificial Intelligence Systems.<sup>18</sup>
- *The Organisation for Economic Co-operation and Development (OECD) Principles on Artificial Intelligence* – In May 2019, member countries of the Organisation for Economic Co-operation and Development (OECD) adopted the OECD Principles on Artificial Intelligence to promote AI that is innovative and trustworthy and that respects human rights and democratic values.<sup>19</sup>
- *The Beijing AI Principles* – To guide the evolution of AI in China, many Universities, Institutes and companies collectively launched 15 principles popularly known as “*The Beijing Principles*” in May 2019 for healthy development of AI and realization of beneficial AI for humankind and nature.<sup>20</sup>
- *Australia’s 8 Artificial Intelligence (AI) Ethics Principles* – In November 2019, Department of Industry, Science and Resources in Australia has proposed the AI Ethics principles to ensure safe, secure and reliable AI with reduced risks of negative impact. They ensure that AI benefit human, societal and environmental wellbeing, AI should have human-centric values, should be fair, reliable and safe, provide privacy protection and security, should be transparent, responsible and have contestability and accountability.<sup>21</sup>
- *Draft text of recommendation on ethics of AI by UNESCO* – In March 2020, UNESCO published “*Recommendation on the Ethics of Artificial*

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<sup>18</sup> Partnership on AI <<https://partnershiponai.org/about/>> accessed 16 May 2023.

<sup>19</sup> OECD, ‘Fourty- two countries adopt new OECD Principles on Artificial Intelligence’ <<https://www.oecd.org/science/forty-two-countries-adopt-new-oecd-principles-on-artificial-intelligence.htm>> accessed 16 May 2023.

<sup>20</sup> ‘The Beijing Principles’ <<https://ai-ethics-and-governance.institute/beijing-artificial-intelligence-principles/>> accessed 16 May 2023.

<sup>21</sup> ‘Australia’s AI Ethics Principles’ <<https://www.industry.gov.au/publications/australias-artificial-intelligence-ethics-framework/australias-ai-ethics-principles>> accessed 16 May 2023.

*Intelligence*”, a framework highlighting the need of regulating AI ethically, protecting human rights and dignity by human oversight of AI systems, which was adopted by all the 193 member states in November 2021.<sup>22</sup>

- *The European Commission proposed regulation (EU AI Act)* – In April 2021, the European Commission proposed a regulation on AI to address its risks and to provide guidelines to AI developers and users.<sup>23</sup>
- *The National AI Initiative Act (U.S. AI Act) 2020* – This became a law in January 2021 in USA to accelerate AI research and application for Nation’s economic prosperity and national security by establishing National AI Initiative Office, National Artificial Intelligence Advisory Committee and National AI Research Resource Task Force.
- *“Responsible AI for All” by National Institution for Transforming India (NITI Aayog)* – The landmark report outlining India's national plan for utilising the promise of AI while being aware of its multiple drawbacks was published by NITI Aayog in June 2018.<sup>24</sup> Two more approach papers that discussed how AI ethics can be conceptualized in the Indian setting were then released the following year.<sup>25</sup> Further, in November 2022 the NITI Aayog has released a discussion paper focusing on Facial recognition technology (FRT) as the first use case for examining the Responsible AI (RAI) principles and operationalization mechanism proposed earlier.<sup>26</sup>

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<sup>22</sup> UNESCO, ‘Draft Recommendation on the Ethics of Artificial Intelligence’ (2021) UNESCO GC 41 <<https://unesdoc.unesco.org/ark:/48223/pf0000378931>> accessed 16 May 2023.

<sup>23</sup> EUR Lex, ‘Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonized Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending certain Union Legislative Acts’ (2021) COM/2021/206 final <<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52021PC0206>> accessed 16 May 2023.

<sup>24</sup> Niti Aayog, ‘National Strategy for Artificial Intelligence’ Discussion Paper (June 2018) <<https://indiaai.gov.in/documents/pdf/NationalStrategy-for-AI-Discussion-Paper.pdf>> accessed 16 May 2023.

<sup>25</sup> Niti Aayog, ‘Approach Document for India Part 1 – Principles for Responsible AI’ (February 2021) <<https://www.niti.gov.in/sites/default/files/2021-02/Responsible-AI-22022021.pdf>> accessed 16 May 2023; NITI Aayog, ‘Approach Document for India: Part 2 - Operationalizing Principles for Responsible AI’ (August 2021) <<https://www.niti.gov.in/sites/default/files/2021-08/Part2-Responsible-AI-12082021.pdf>> accessed 16 May 2023.

<sup>26</sup> Niti Aayog, ‘Responsible AI for All: Adopting the Framework – A use case approach on Facial Recognition Technology’ Discussion Paper (November 2022) <<https://www.niti.gov.in/sites/default/files/2023-03/Responsible-AI-AIForAll-Approach-Document-for-India-Part-Principles-for-Responsible-AI.pdf>> accessed 16 May 2023.

- *The Algorithmic Accountability Act of 2022* – It was proposed by US Senators Ron Wyden and Cory Booker and Representative Yvette Clarke in February 2022 to regulate AI effectively without bias in Industrial sector, Banking, Insurance companies, retailers and other consumer businesses.
- *Global Partnership on AI (GPAI)* – In June 2020, a multi-stakeholder initiative developed by G7 alliance, an intergovernmental political forum comprising Canada, France, Germany, Italy, Japan, The United Kingdom and the United States with European Union, to fill the gap between theory and practice relate to AI by supporting the research and development on AI. Today it has 29 members including India.

### **Threats posed by Artificial Intelligence**

AI presents several risks and dangers to society, including job displacement, bias and misinformation, cyberattacks and manipulation, weaponization, privacy violations and discrimination. AI can rapidly learn and improve with each generation, making it more efficient and cost-effective than human labour, potentially leading to unemployment. AI can also exhibit bias and consider the data it is programmed with, as the absolute truth, potentially violating privacy laws and causing discrimination. Furthermore, AI can be weaponized to target vulnerable populations. As AI systems become more advanced and integrated into societal infrastructure, the consequences of losing control over them become increasingly worrisome.

In 2013, IBM with The University of Texas developed 'IBM Watson' as Oncology Expert Advisor System, but doctors identified it as unsafe as it provided incorrect treatment recommendations. In March 2018, Elaine Herzberg a 49-year-old woman died as she was struck by an Uber self-driving car operating in autonomous mode. In 2016, Microsoft Tay, an AI chatbot was released by Microsoft Corporation and it began posting defamatory and offensive tweets via its twitter account leading to the shutdown of the service. In same year, Amazon Web Services developed Amazon's *Rekognition*, a facial recognition technology to

analyse images and videos to identify faces, things, scenes among other features. Later it was found that it was biased towards women and black people due to the data provided.<sup>27</sup>

Recently, in April 2023, Aaradhya Bachchan, the grand-daughter of Amitabh Bachchan filed a Suit for permanent injunction and removal of objectionable content from social media before the Delhi High Court alleging that her morphed pictures and videos were viral in YouTube where she is shown as critically ill, ailing, suffering and in some videos declared her dead just for the sake of publicity and inviting subscriptions. She claimed that utilisation of AI in morphing her pictures and sharing it in public domain amounted to infringement on her right to privacy, violates her copyright over her images, and violation of Rule 3(1)(b)(iii) of the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.<sup>28</sup>

The implementation of AI technologies like GPT-3 could potentially alter the intended balance of power in the patent system, tipping it in favour of the inventor and away from the public. GPT-3 and similar AI tools may enable inventors to claim more in their patents than what they originally created, unfairly expanding their exclusive rights without providing any benefits to the public. Concerns have been raised regarding the custody, ownership, and attribution of content generated by AI and intended for widespread distribution. The legal precedent for reusing such content, if it was derived from the intellectual property of others, remains uncertain.

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<sup>27</sup> Lexalytics, 'Stories of AI Failure and How to Avoid Similar AI Fails' (*Lexalytics*, 2020) <<https://www.lexalytics.com/blog/stories-ai-failure-avoid-ai-fails-2020/>> accessed 16 May 2023.

<sup>28</sup> *Ms. Aaradhya Bachchan and Anr. vs. Bollywood Time & Ors.*, [2023] DHC CS (COMM) 230/2023.

## Suggestions

'*Ubi Jus Ibi Remedium*' is the fundamental principle of law which means, where there is a right, there is a remedy.<sup>29</sup> Law provides that every human owes duty towards others. If he does breach his duty resulting in legal injury to others, he is liable to make good the loss by way of legal remedies. But in the case of wrongful act committed by an AI, which is the creation of human creativity, the determination of liability is uncertain. When an AI uses given data and invents an outcome, it could result in infringement of copyright inbuilt in such given data for which AI itself cannot be made liable as it cannot perform the obligations nor compensate. The electronic person like AI cannot be made liable as its rights and obligations cannot be legally enforced. However, pursuant to public policy a natural person who initiated such AI and due to whose negligence copyright violation or patent infringement took place can be made vicariously liable, as he will be in a position to oblige the liability like in specific performance, injunctions or providing damages under the rule of strict liability.

The best way to develop AI generated works and inventions is by providing them protection under The Patents Act 1970 and The Copyrights Act 1957. The natural person initiating such AI and its generated works should only be considered as copyright owner and inventor. Nevertheless, it is crucial to determine which works should be patented, the reasons for their protection, and the measures to be taken against infringers. While AI is generating new inventions and works, it is also infringing on the copyrights of others. The question arises as to how AI inventions and their generated works can be protected. Further the process, configurations or works of AI can also be protected as Trade secrets. In India, presently there is no uniform legislation to protect trade secrets and confidential information, it is protected on the basis of common law remedies for breach of confidence and breach of contract.

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<sup>29</sup> Tracy A. Thomas, '*Ubi Jus, Ibi Remedium*': The Fundamental Right to a Remedy' 41 SDLR 1633 (2004).



The legal remedies available under Civil Law are Suit for injunctions to prevent a licensee, vendor, employee or other party from disclosing the trade secret, Suit for recovery of all confidential and proprietary information, Suit for compensation for any losses caused due to disclosure of trade secrets. Trade secrets have been impliedly protected under Section 27 of the Indian Contract Act, 1872, which protects the firm's confidentiality between employer and employee or partners. Section 43A of The Information Technology Act, provides compensation for wrongful loss due to mishandling of sensitive information and Section 72 provides criminal liability for breach of secrecy and trust.<sup>30</sup> The remedies under criminal law include Section 378 of the Indian Penal Code where punishments are given for stolen confidential client lists, business innovations etc., Section 405 provides punishment for criminal breach of trust and Section 420 contains punishment for cheating.<sup>31</sup> Therefore, choosing trade secret protection for AI-generated inventions is a smarter choice because it offers confidentiality, unlimited protection, and is more cost-effective than patent protection.

Humans and AI have the ability to coexist and work together in a harmonious manner to achieve results that neither could achieve alone. AI has the potential to significantly transform work, the worker, and the workplace, and create a highly productive environment. AI can enhance human intelligence by consolidating knowledge from all the achievements of mankind, enabling collaboration across time and space.

## **Conclusion**

AI has numerous advantages. It can decrease human error, increase precision and efficiency, operate continuously, reduce training and operational costs, enhance processes, assist with repetitive tasks, provide digital aid, accelerate decision-making, simplify tasks, save time, eliminate biases, automate monotonous tasks, boost production and advance product development. Additionally, AI can be beneficial in a

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<sup>30</sup> See Information Technology Act, 2000.

<sup>31</sup> See Indian Penal Code, 1860.

variety of industries such as healthcare, manufacturing, transportation and agriculture. AI can facilitate innovation in a number of ways. For instance, AI can free up time for creative thinking by automating monotonous tasks and creating room for innovation. AI can also identify new relationships and connections by analyzing vast amounts of data and generating unique patterns and insights.

Furthermore, AI can make advanced technologies and tools available to a broader audience, thereby democratizing creativity. However, it is crucial to maintain balance between development of AI and protection of mankind. To achieve this, it is important to educate people on AI, its merits and demerits and dangers posed to mankind. Awareness on AI must be initiated from school level so that children can get benefit in gaining knowledge through AI. Although there are concerns that AI may replace human labour, it has to be noted that it is only humans who can activate and initiate the working of AI. The Government of India also should appoint committees for regulating the using and working of AI as misusing AI with malice and negligence can take place. Legislations and regulations on AI and its inventions should be made so that AI can be supervised for the betterment of humans. Nevertheless, AI should not be considered a legal entity.

In 2014, Britain's eminent scientist Prof Stephen Hawking, in an interview with BBC said that development of Artificial intelligence will be at an ever-increasing speed and it would lead to destruction of mankind as humans will not be able to compete with it. It is important to remember that unregulated development can lead to disastrous consequences. Reliance is placed on AI for our social, economic and political advancements and if it is not regulated ethically, it could result in the destruction of the human race. However, individuals engaged in the development of AI and AI-generated works should be legally protected, acknowledged and appropriately rewarded.