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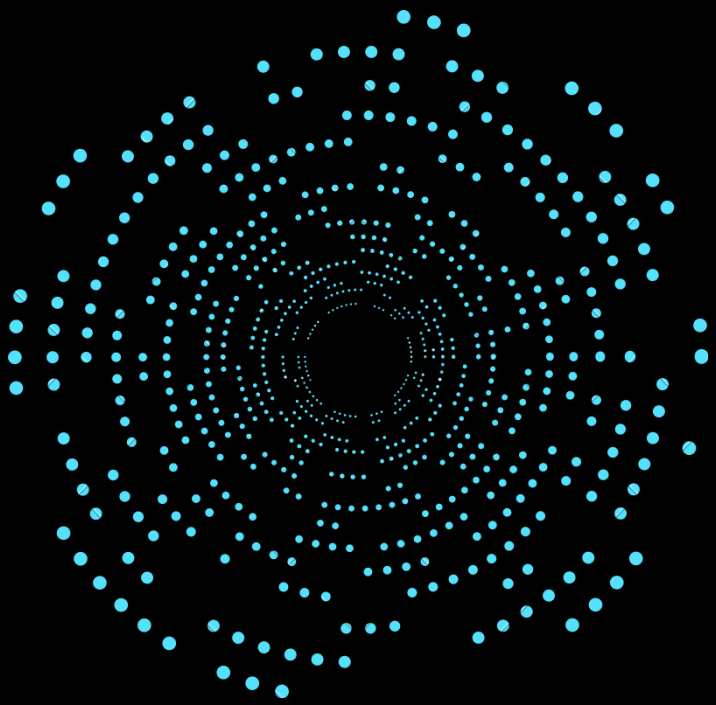

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SCOPE OF LAW IN AN AI-DRIVEN WORLD – A BRIEF ON CHATGPT AND ITS LEGAL IMPLICATIONS

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ABSTRACT

The onset of technological advancement calls for an extended scrutinization of current legal regime around the world. The advent of technological development is pushing boundaries of technology law whereby; it is, hereinafter, not just concentrated to technical difficulties such as data storage, intellectual rights, or licence agreement complexities. Instead, it will address several major issues that could have a significant impact on practically every part of our lives. Addressing one such technological marvel is ChatGPT. It is a present-time evolving machine-learning artificial intelligence garnering recognition on a global scale. It was launched as a prototype on November 30th of 2022 by OpenAI - an AI research and deployment company. The extented and motivated use of artificial intelligence in commerce, healthcare and other prominent fields confers responsibility on the law-makers to undertake exhaustive critical analysis of such advancements and provide for a befitting legal framework to regulate such technology. The paper deals with various intricacies of artificial intelligence from its inception, walking through its evolution over the years and conclusively contributing to a critical analysis of the ChatGPT and the legal implications associated with it from the standpoint of the Indian Legal Framework.

INTRODUCTION

Amazon released a comedy series called "Upload" in April 2020. The show envisions a future in which technological advances have facilitated successful in-silico simulation of human consciousness. Companies use this technology to "upload" dying people into digital worlds where they can "live" in perpetuity. When human consciousness is uploaded, it is turned into data and executable code, which can be altered, throttled, or even destroyed depending on each upload's membership plan and payment status. Referring to a more global approach, the momentous Marvel movies are epitome of a technology driven world. In this context, 'Ultron', is a self-aware and highly intelligent artificial intelligence who develops a god complex. The former part surely indicates to a beneficial progression whereas the latter part can be a dreadful possibility to say the least. By portraying such worlds breaks the boundaries between reality and virtual reality, consciousness and artificial intelligence entangling various legal questions in novel ways. IPR laws around the globe are being tailored to fit the technological outbreak in conformity to the human laws. Autonomy, non-digital rights, ownership, infringements; all of it are being placed on the dock for trial.

Through this short analysis, we hope to shift the conversation from rather micing words to critical dismemberment of this off the beaten track artificial intelligence thereby reigniting the legal community's engagement with science fiction, enticing a nuanced dialogue about what is artificial in artificial intelligence, what is virtual in virtual reality, and what is digital in digital rights. We argue that becoming early adopters of a new reconceptualized language around "us" and "them, can perhaps endure our society from the cyborg perils that are in conversation presently and the ones that await. This paper focuses on the intricacies of artificial intelligence whilst deciphering the up and about AI named ChatGPT; from the perspective of Indian legal framework. ChatGPT has been an

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active contributor to this paper starting with a poem on itself.

"As we build AI so bright and new,

We must consider what is true and right,

For with great power comes great responsibility,

To ensure our creations serve and benefit humanity.

We must strive to understand,

The potential consequences of our demands,

And act with care and foresight,

To avoid missteps and wrongs in the night.

For the path we take today,

Will shape the world of tomorrow,

So let us choose our course wisely,

And work towards a brighter, AI-powered future."

CHATER I

DEVELOPMENT OF AI IN INDIA

"If India does not adopt new technology with changing times, it will remain backward; the country experienced this during the third industrial revolution,"

- PM NARENDRA MODI

In this era of digitization, it has become necessary to harness the full potential of data. It has also become necessary to promote AI based research and innovation for the growth and development of the country, to facilitate technological advancements by allowing researchers, innovators, private entities and start-ups to gain access to non-personal datasets.

Some advantages are:-

1.1. AI Seizes More Knowledge Gradually

AI technology, as the name alludes, is astute and dynamic and makes use of its ability to improve network security gradually. It employs machine learning and deep learning to learn the behaviour, groups patterns in the network and then scours for any deviations or security incidents from the norm before responding.

1.2. Remote Threats are Analysed

The shortcomings of human capabilities are provided for by artificial intelligence. There are many facets of anonymous and trivial; at times, but exponentially effecting threats that are faced by a business such as hackers launching attacks for numerous reasons, which in turn shall cause massive network damage

1.3. AI is Capable of Handling Copious Datasets

A company has a jampacked traffic implying copious data being transferred per minute between clients and companies. This data must be safeguarded against nefarious individuals and software. However, cybersecurity specialists cannot examine all traffic for potential threats.

1.4. More Effective Susceptible Management

As mentioned earlier, transfer of copious datasets endangered by numerous unidentified threats on a daily basis makes protection system a vital point in the system. To be secure, it must detect, identify, and prevent them. AI research can assist in vulnerability management by analysing and assessing existing security measures.

In light of these varied constituent baggage of benefits AI brings with it, the Indian Government has encapsulated the concept of AI in the Indian technological sphere. Since the launch of the Digital India initiative in 2015, the government has compelled for AI implementation and digitisation. AI and machine learning are being actively adopted and implemented in government services.

With AI rapidly advancing and countries such as China making consistent progress in AI-based research, it is critical that India considers this technology to be a critical component for development. Arun Jaitley stated in his February 2018 budget speech that Niti Aayog would

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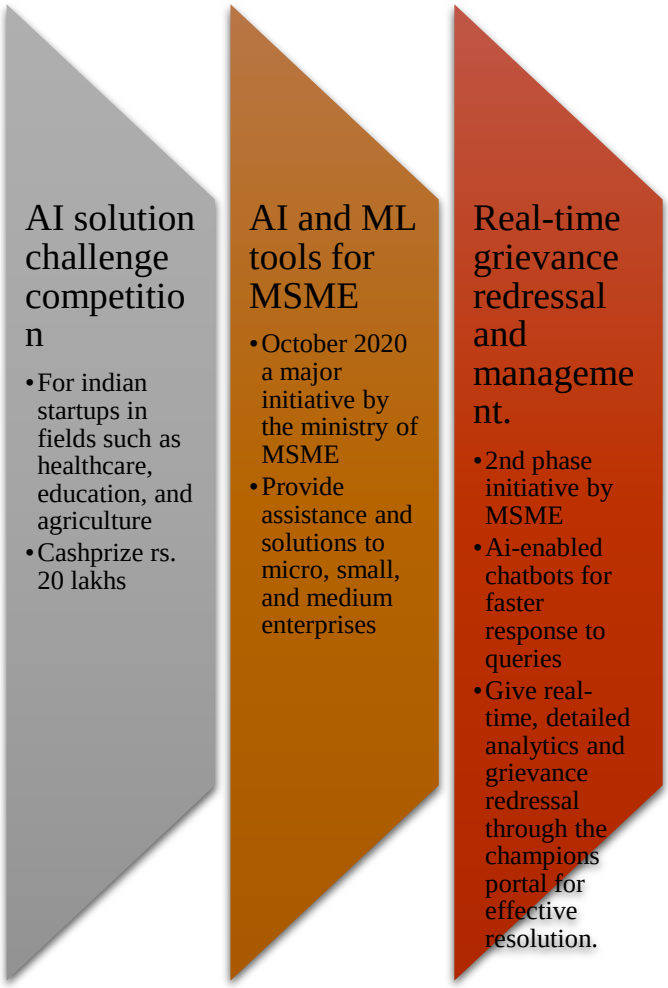
spearhead a national programme on AI and related research and development. The budget for Digital India, the government's umbrella initiative to endorse AI, ML, 3D printing, and other technologies, was nearly doubled to INR 3,073 crore that same year (USD 477 million). [18]

India's development model incorporates a significant amount of technological advancement, including AI. Exponential increase can be notes over the years. 2020 was the year for AI to gain significant momentum in India. The government launched and initiated various programmes to instigate and fuel AI-Driven technological advancement in India.

The following is cumulative timeline of AI growth in India.



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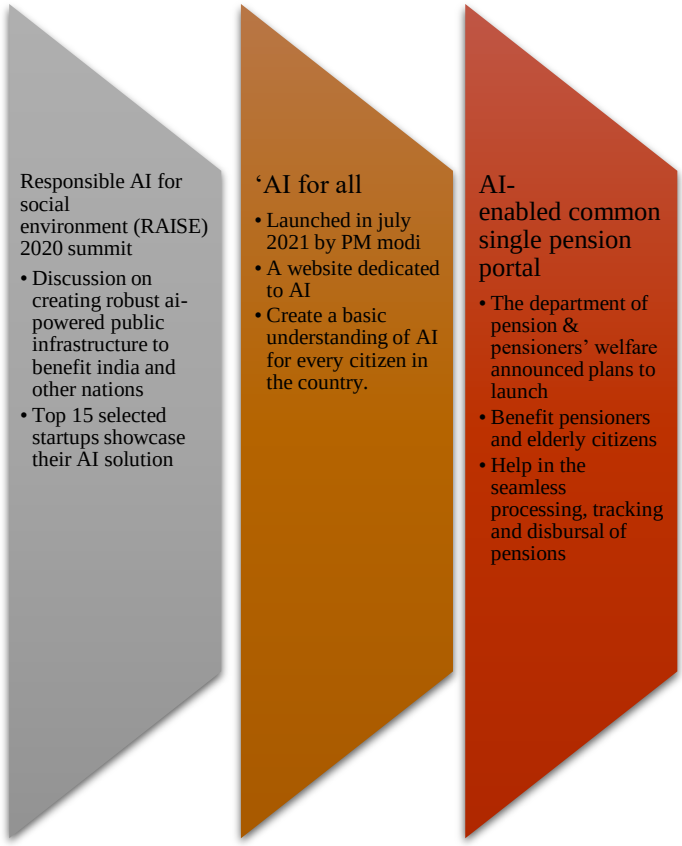

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The point of contention here being is the ombudsman for this nascent development. Speaking at the closing session of the three-day GPAI Summit, the Minister of State for Electronics & Information Technology and Skill Development & Entrepreneurship, Shri Rajeev Chandrasekhar said it is important to understand that user harm, criminality and issues that threaten trust online are proliferating.[25] "We all should be concerned about user harm. I would encourage member states to think about evolving a common framework of rules and guidelines about data governance, about safety and trust as much to do with the internet as to do with AI."

[18] https://www.indiabudget.gov.in/doc/eb/sbe27.pdf
[19] https://analyticsindiamag.com/startups-that-won-indias-ai-solution-challenge-at-raise-2020/
[20] https://pib.gov.in/PressReleasePage.aspx?PRID=1664442
[21] https://www.businesstoday.in/latest/economy-politics/story/intel-artificial-intelligence-machine-learning-tools-help-centre-gather-insights-on-msmes-275632-2020-10-14
[22] https://analyticsindiamag.com/startups-that-won-indias-ai-solution-challenge-at-raise-2020/
[23] https://ai-for-all.in/#/home
[24] https://newsonair.gov.in/News?title=DOPPW-to-soon-launch-Artificial-Intelligence-enabled-Common-Single-Pension-Portal&id=442737
[25] Orissadiary.com

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The problems in a developing country like India are much more substantial because the basic infrastructure needs to be revised. The preponderance of challenges associated with application of AI needs to be addressed ranging from the pattern recognition, ethics to biased decisions. Employment of AI requires amendments in technology law, IPR law, data protection law and many more.

CHAPTER II

CHATBOTS

2.1. MEANING

You've probably interacted with a chatbot whether you were conscious of it or not.

For instance, you are surfing the net for a product and dialogue box pops up to assist you in your shopping or ordering food through a drive-through restaurant and an automated machine jotting down your order or speaking to a voice assistant on an app on your phone giving standard response for predetermined queries put to it. In all these scenarios you are encountering a chatbot.

Superficially, Chatbot is an axiom, processing human conversation (either written or spoken), obliging human queries and instruction like speaking to a real person. Chatbots can be as simple as rudimentary technology that give single-line response to queries or sophisticated personalized response as they gather and process information.

2.2. HOW DO CHATBOTS WORK?

Driven by AI, automated rules, natural-language processing (NLP), and machine learning (ML), chatbots process data to deliver responses to requests of all kinds.

There are two main types of chatbots:-

- ***Task-oriented (declarative) chatbots*** are systems with a single purpose which is to perform one function. They prompt automated but conversational reply to standard queries using rules, NLP, and very little ML. Interplay with these chatbots is very definitive and orderly. They are pertinent for support services and interactive FAQs. Like, online sites have chat assistant that handle common questions such as return and replacement, order status i.e. simple transactions with streamlined responses. Though they use NLP to provide end users with a conversational experience, their capabilities are fairly basic. These are the most mainstream chatbots right now.

- ***Data-driven and predictive (conversational) chatbots*** are akin to virtual assistants that are more sophisticated and advanced than task-oriented chatbots. These chatbots are contextually cognizant and undertake tasks through natural language understanding (NLU), natural language processing (NLP), and machine learning (ML) to learn as they go. It is servile and makes use of analytical intelligence that is predictive and tailored to deliver personalized content to user based on behaviour patterns. Gradually, digital assistants via data collected and configured of the user can offer guidance and even anticipate needs. Consumer-oriented, data-driven, inferential chatbots such as Apple's Siri and Amazon's Alexa are prime examples.

2.3. HISTORICAL BACKGROUND

"You all know that chatbots are a new technology altogether. It's like the early age of the Web. Things are still shaky yet growing at the speed of light."

- Rashid Khan, 'Build Better chatbots'

Truer words have not been spoken. Chatbots have recently become an efficient factor of C2B business model and engage with customer by effectuating hope of getting questions answered, orders placed, and business done. Intriguing as it maybe; chatbots have been around since the mid-1960s. English computer scientist and pioneer Alan Turing's famous

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"Turing Test" in 1950 posed the question of whether a computer program could talk to a group of people without realizing that their interlocutor was artificial.[26]This essentially would be the genesis of chatbot technology. The growth and development of chatbots can be summarized by the words of Winston Churchill - *"The farther backward you can look, the farther forward you are likely to see."* Hence it's only imperative and behoves to walk through the history of chatbots deciphered here in two parts: the first part focusing on the early history of chatbots (i.e., 1960s-1990s) and the second part focusing on the later history of chatbots from the 2000s and beyond. A history of chatbots provides the scope needed to understand its technology, where it began, where it went, and where it is going. This, in turn, will segue into a discussion of the influences the history of chatbots have had on ChatGPT.

2.3.1. Early history of chatbots

Joseph Weizenbaum developed the first chatterbot software in 1966 at the Massachusetts Institute of Technology's (MIT) Artificial Intelligence (AI) department. Chatterbots are computer programmes that mimic human discourse to communicate with users. The chatterbot programme ELIZA, which was developed to mimic human conversations using pre-programmed responses, was named after Eliza Doolittle, one of the key characters in George Bernard Shaw's play Pygmalion. Following an analysis of the user-supplied keywords, ELIZA triggered its pre-programmed output in accordance with a predetermined set of criteria. It provided responses to queries only by examining the prompts a user typed because it lacked a framework for comprehending the settings of discussions.

AI was still a very recent concept. The AI in ELIZA was at best primitive and primeval even sixteen years after Alan Turing's "test" in 1950 hypothesized that a computer programme could conduct a natural conversation with a human. The first programme to pass the Turing Test was the natural language programme PARRY, devised by Stanford University psychiatrist Kenneth Mark Colby, in 1972, and it wasn't until then that chatterbot technology began to take off.[27]

PARRY was viewed as being more erudite than ELIZA. It had a "personality" and a more effective controlling structure that based answers on an assumption-based framework and "emotional responses" that were prompted by a user's changing utterances. Nevertheless, PARRY was still perceived as a chatbot with limited capabilities that was unable to pick up new information from conversations.

AI, chatterbot technology, and the realm of digital communication would have to wait their turn. In the United States, private and public sector research on AI and chatterbot technology would not resume until the 1980s. Indeed, what is now known as "The Winter of AI" from 1974 to 1980 is what sparked renewed interest in these fields in the United States. RACTER, a chatbot written by William Chamberlain and Thomas Etter in 1983, is one example of "The Winter of AI" chatbot technology. RACTER, short for *"raconteur"* (storyteller in French), was so successful that Chamberlain published a book created by RACTER in 1984, titled "The Policeman's Beard."

The early 1980s "Winter of AI" was regarded as the birthplace of Expert Systems - computational systems that simulated the ability of humans with specialised skill sets to make decisions. These systems made it possible for businesses to automate certain processes, save money in certain areas of expenditure, and integrate with the commercial and retail industries. These systems, however, were marred by slow development and maintenance, which contributed in failures and

[26] (Adamopoulous, E. & Moussiades, L., 2020).

[27] Arya, M. "A brief history of Chatbots." Chatbots Life. 11 March 2019. https://chatbotslife.com/a-brief-history-of-chatbots-d5a8689cf52f. (3 June 2022). & Ina. "The History of Chatbots – From ELIZA to ALEXA." Onlim. 12 October 2017. https://onlim.com/en/the-history-of-chatbots/. (3 June 2022).

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increased disinterest in those technologies. The "Second Winter of AI" began, and the technologies were once again stonewalled by inadequate research and investment from 1987 to 1993.[28]

This "Second Winter of AI" did, however, elicit a greater response from researchers and industries to rekindle interest and investment in AI technologies than the First Winter, and the 1990s saw the introduction of a new AI focus - creating an "intelligent agent."[29] This represented a system or programme capable of conducting a variety of tasks, which could be translated into online shopping, web search, and other activities. This new focus, combined with advancements in cybernetics and neural networks, stemmed in an AI-renaissance in the 1990s.

During this time, computer scientist Michael Mauldin coined the term "chatbot," drawing inspiration from Joseph Weizenbaum's *"chatterbot."* The term "chatbot" was applied to the chatterbot programme in TINYMUD, a multiplayer real-time virtual world in which the primary function was to chat. The chatbot became popular in the TINYMUD world as more and more real human players preferred to communicate with it rather than with other players. It was successful because the human "players assumed that everyone was a human and could only cause doubts if it made a significant mistake"[30]

Another piece of chatbot technology was introduced in 1992 with the creation of the chatbot "DR. Sbaisto" (which stood for Sound Blaster Acting Intelligent Text to Speech Operator) to display the digitised voices that computer sound cards can produce. Chatbot technology was finally becoming artificially intelligent enough to become a household interactive tool in the near future.

Another well-known computer scientist, Richard Wallace, was inspired by the work of Joseph Weizenbaum and created his chatterbot programme A.L.I.C.E (Artificial Linguistic Internet Computer Entity) in 1995. This chatterbot programme was awarded the prestigious Loebner prize three times for being the most human-like chatbot of its time, but it never passed the Turing test of being able to think as intelligently as humans.[31]

Rollo Carpenter, an English computer scientist, launched the Jabberwacky chatbot (created in 1981) on the Internet in 1997. It would become more consumer-friendly in 2008 under the name Cleverbot, continuing its purpose of simulating natural human chat in entertaining ways.

Chatbot technologies were broadly acknowledged by the end of the 1990s as a permanent fixture in online communication, retail, and business. What began as simple programmes to carry out basic conversation based on command prompts had morphed into advanced computation systems, natural processing languages, and artificial intelligence. Chatbots could indeed now not only carry on a conversation with a human consumer, but also facilitate and add substance to the conversation.

2.3.2. History of chatbots from the 2000s and beyond

Chatbot technology and the artificial intelligence that drove its advancements became more common for commercial businesses that use chat in their operations and consumer interactions. Chat widgets and chatbots would proliferate like wildfire in the 2000s, improving on themselves to provide

[28] Lohr, S. "Ending the chatbot's 'spiral of misery'." *Bdnews24.com*. 5 April 2022. https://bdnews24.com/technology/2022/04/05/ending-the-chatbots-spiral-of-misery. (6 April 2022).
[29] Gunko, I. "Is AI Really Intelligent? (And What It Means For Your Chatbot)." Cloud Academy. 6 May 2020. https://cloudacademy.com/blog/is-ai-really-intelligent-and-what-it-means-for-your-chatbot/. (3 June 2022)
[30] ." (Adamopoulous, E. & Moussiades, L., 2020).
[31] Perdigão, F. "Does Artificial Intelligence Really Make Chatbots Smarter?" Visor.ai. 10 February 2021. https://www.visor.ai/artificial-intelligence-chatbots/. (3 June 2022).

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more channels of communication for consumers while also contributing to the boom of newly formed chatbot providers and companies.

CHAPTER III

CHATGPT

3.1. OVERVIEW

ChatGPT is launched by a non-profit artificial intelligence research organisation named Open AI, it was founded by Altman, Musk, and other Silicon Valley investors. OpenAI became a "capped-profit" company in 2015, which implies that it limits returns on investments after a predetermined point. Musk stepped down from the board in 2018 due to a conflict of interest between OpenAI and Tesla's autonomous driving research. He is still an investor, however, and articulated his excitement for ChatGPT's launch stating it as "terrifyingly good" Altman tweeted apropos to the future of AI Chatbots proclaiming erudite technology proxy to helpful assistants that converse, recommend and counsel.

The AI-powered chatbot – a software programmed to simulate human conversation – was made available to the public on November 30 via OpenAI's website, and while it is still in the research review phase, users can sign up and test it out free of charge. ChatGPT is not the first AI chatbot developed. Several corporations, including Microsoft, have dabbled in the field of chatbots, but with little success. Beginning with the release of Microsoft's Tay bot in 2016, Meta entered the league with the release of BlenderBOt3 in August. Both were chastised for their mysoginistic and racial statements. To avoid such incidents, OpenAI has implemented Moderation API, an AI-based moderation system that has been taught to aid developers in assessing whether language violates OpenAI's content guideline, which prevents harmful or unlawful information from coming through. OpenAI recognises that its moderation still has problems and isn't completely correct.

3.2. TECHNICAL ANATOMY

ChatGPT employs the GPT-3.5 language technology, which is a big artificial intelligence model created by OpenAI and trained on massive amounts of text data from many sources.

The bot has a dialogue style that allows users to submit both simple and complex instructions that ChatGPT has been taught to follow and respond to in detail - the company claims it can even answer follow-up questions and admit when it made a mistake.

Most notably, when given a cue, ChatGPT was able to build complicated Python code and compose college-level essays, raising concerns that such technology could eventually replace human workers such as journalists or programmers.

The program has its limitations, including a knowledge base that ends in 2021, a tendency to produce incorrect answers, constantly using the same phrases and when given one version of a question, the bot claims it cannot answer it, but when given a slightly tweaked version, it answers it just fine.

Many large figures in the tech world have expressed their astonishment with ChatGPT, like Box CEO Aaron Levie[32], who tweeted about the software giving a glimpse into the future of technology and how *"everything is going to be different going forward."* According to CEO Sam Altman[33], the software reached the one million users mark on Monday, less than a week after its launch.

CHAPTER IV

LEGAL IMPLICATIONS

With the progress being made by India in terms of technology and the rapid pace with which start-ups are mushrooming all over the country, it is evident that India is transitioning towards being a knowledge-based economy. AI being a versatile component accommodating various

[32] https://twitter.com/levie/status/1599156293050433536?lang=en
[33] https://twitter.com/sama/status/1598038815599661056?lang=en

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sectors universally spawns legal irregularities. As discussed above, India is morphing into a global superpower by major enforcement in the technological sector. Robust amendments are the way froward that can be effectuated by analysing the developments in the environment. As the use of AI technologies advances, judicial systems are being engaged in legal questions concerning the implications of AI for human rights, surveillance and liability, among others. The following are the most contested point of law pertaining to AI development in India.

4.1. IPR

A good ecosystem not only offers sound protection to technology but also incentivises growth and ensures prevention of counterfeits – hence providing overall promotion to the technological sector. Imagine, every technology/innovation that gets introduced is immediately counterfeited, and cheap fakes fill up the market right before the original product is marketed. A good IP ecosystem is the *sine qua non* for becoming a global technology leader as it simulates growth and innovation.[34]

There is a perceptible shift in IP awareness in the Indian economy. India achieved another milestone in context of IP innovation ecosystem, wherein for the first time in the last 11 years, the number of domestic patent filing has surpassed the number of international patent filing at Indian patent office in the Quarter Jan-Mar 2022 i.e. of the total 19796 patent applications filed, 10706 were filed by Indian applicants against 9090 by non-Indian applicants.[35] The Union Minister of Commerce and Industry, Consumer Affairs, Public Distribution and Textiles, Shri Piyush Goyal appreciated the consistent efforts made by DPIIT on strengthening the IPR regime in India by fostering innovation, and reducing compliance burden. The coordinated effort by DPIIT and IP office has led to increased IP awareness among all strata of society. These efforts have on one hand led to increase in the number of IPR filings, on the other hand has reduced the pendency of patent application at IP offices. He also mentioned that this will take India a step closer to the India's ambitious target of being in the top 25 nations of Global Innovation Index.[36] A report[37] by the Economic Advisory Council to the Prime Minister (EAC-PM), also noted that there had been significant improvements in simplifying procedures, allowing expedited examination to various categories of applicants, electronic delivery of certificates, facility for video-conferencing etc. The report also revealed that patents granted in India went up from 45,444 in 2016-17 to 66,440 in 2021-22. Overall, patents granted increased from 9,847 to 30,074 during the same period. "Simultaneously, there has been an increase in the share of residents in the applications from less than 30% in 2016-17 to 44.5% in 2021- 22," the report stated.[38]

4.1.1. AI AND PATENT

IP awareness encompasses IP protection laws and are required to be proactive and flexible more than ever. There isn't a specific act or provision that regulates Ai which is major setback given the current development. AI are being casually construed under the conventional intellectual property tags such as creative writing, books and discoveries; which is the most neglectful mannerism of inclusivism. The scope of AI is broader and requires a contemporary statutory recognition. The current regime of not considering computer programmes, business methods and mathematical formulae as patentable inventions under the Patent Act of 1970 is blatant insufficiency of the legislation.

The other major facets of statutory insufficiency are the following: -

Firstly, the term 'Patentee' under section 2(p) of the Act[39] and 'Person Interested' under Section 2 (t) of the Act[40] is a hindrance to incorporating AI

[34] Arushi Gupta, founder of Satyaki Legal.
[35] https://twitter.com/CIPAM_India/status/1513844847458734084
[36] https://pib.gov.in/PressReleasePage.aspx?PRID=1815852
[37] https://eacpm.gov.in/wp-content/uploads/2022/08/Why-India-needs-to-urgently-invest-in-its-IPR-ecosystem-16th-Aug-2022_Final.pdf
[38] Confederation of Indian Industry
[39] Patent Act, 1970
[40] Patent Act, 1970

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into its realm. The Act expressly excludes the patentee of any other person who wishes to be human.

Secondly, the grotesque discrimination set out by Section 6 of the Patent act wherein anyone claiming to be the true and first inventor of the invention may seek a patent. Subject to Section 2(1)(s)[41] wherein natural person is set out from others under the meaning of 'person'; apparently leaves out the opportunity for an AI to claim ownership. The bedrock for establishment of AI in this country, so as to keep up with the outbreak of technological advancement, amendments at the grassroot level of IP legislation cannot be emphasized enough.

This was critically examined in the case of Dr Stephen Thaler's Artificial Intelligence("AI') system, the Device for Autonomous Bootstrapping of Unified Sentience ("DABUS")[42]. It was one of a kind AI trained to surrogate certain facets of human brain function. Two DABUS-invented inventions i.e. an efficient beverage container and a flashing light, were filed for patent by Dr Thaler on behalf of DABUS, in various countries. In response to such application in India, the Controller General of Patents expressed objections in the Examination Report[43] citing inadequacy in passing formal and technical examination. The sole issue here being that DABUS is incapacitated by the stator norms under Section 2 and 6 of the patents act as discussed above thereby not recognized as a person. This is supported by several legal precedents. For example, in the case of V.B. Mohammed Ibrahim v. Alfred Schafranek[44] , the Court held that neither a financing partner nor a corporation can be the sole applicant as an inventor, and that only a natural person who actually contributes their skill or knowledge to the innovation is able to claim inventorship under law.

The launch of ChatGPT sparks interest on the patentability of AI innovation in a variety of jurisdictions or legal personhood. Because patents are invented by normal individuals with human contact, it is clear that an AI system cannot be designated as an inventor under the current legal setup in most countries. While the government may incorporate the Standing Committee's recommendations, as noted above, in terms of revising legislation to allow for AI and AI-related inventions, some challenges may arise, including:

- It shall become arduous for humans to acquire patent protection in light of changed criterion for 'invention' or ' person knowledgeable in the art' would be altered.
- Mere recognition of AI as an inventor would not facilitate it to hold and exercise property rights
- Onerous objections regarding entitlement and ownership may arise arguable about right to use, own, transfer or assignment of AI-created invention; also the associated authority.
- Imposition of culpability on an infringing AI.

AI AND COPYRIGHT

The basic question arising here is what are the copyright implications of the content curated by ChatGPT. Copyright is a legal privilege that protects the novel inventions of the human mind and intellect. Copyright protection is not limited in its scope of creation; hence, if the proffering is merely an expression of the author it such work shall be protected.

Section 14 of the Copyright Act of 1957 defines "Copyright" as the exclusive rights of the owner to perform or authorise the doing of any activities (such as reproducing work, publishing work, adapting and translating work, and so on) in relation to a work. Furthermore, Section 17 of

[41] Patent Act, 1970
[42] *Thaler v Commissioner of Patents [2021] FCA 879*
[43] FOOD CONTAINER AND DEVICES AND METHODS FOR ATTRACTING ENHANCED ATTENTION, Patent Appln. No. 202017019068 https://ipindiaservices.gov.in/publicsearch/publicationsearch/patentdetails
[44] AIR 1960 Mysore 173

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the Act [45]specifies that the author of the work is the first owner of the copyright.

In Rupendra Kashyap vs. Jiwan Publishing House Pvt. Ltd.[46], the Hon'ble Court held that in the context of examination question papers, the author is a person who has compiled the questions; the person who does this compiling is a natural person, a human being, and not an artificial person; Central Board of Secondary Education is not a natural person, and it would be entitled to claim copyright in the examination papers only if it established that it has engaged persons specifically for purposes of preparation of compilation with a contract that copyright therein will vest in Central Board of Secondary Education. Similarly, courts have ruled in previous cases that a juristic person cannot be the author of any work in which copyright exists. This is also settled by the Copyright Office's Practice and Procedure Manual (2018), which explicitly specifies that for the purposes of Copyright, only natural person details must be submitted as Author of the work. The reasoning of requirement of author being natural person is based on the observations of Courts, in various jurisdictions, determining copyright in a work. Some instances are as under:

1. Author is the first owner of the copyright.[47]
2. Elements of authorship in selection, coordination and arrangement of material are necessary for protection of a compilation.[48]
3. Compilation developed by anyone devoting time, money, labour and skill amounted to a literary work wherein the author had a copyright.[49]
4. The copyright-ability of the work is tested from the original work (being creativity) and exercise of skill and judgments by the author.[50]

However, with technological advancement, artificial intelligence has advanced to the extent that it is capable of understanding and creating results/outputs without human intervention[51] , which in this case is the structure of ChatGPT. The main issue presented in this regard is the protection of work created by it. With the existing regulations of Indian IP laws, particularly copyright, it appears impossible to extend copyright protection to artificial intelligence created works.

The works made by ChatGPT can be classed as "works created by AI with human interference" and "works created by AI without any human involvement". The analogy of ChatGPT deciphered by the founder claims it to process instructions of the user and provide interactive and viable solutions for the same. The extent of the human involvement is a missing quotient here that is the primary determinant to acquire exclusive right over the invention. The point of contention here being that when AI creates work with human intervention, the human who offers inputs to the AI may claim ownership of the work, however when AI creates work without human intercession, the ownership may be claimed by the copyright owner of the AI, i.e. who possesses copyright over the AI software.

The data as well as the cue on which ChatGPT functions is provided by humans hence the facet of the original author is dubious. The existing Indian copyright law does not dispense recognition to AI. Judicial pronouncements have time and again enforced requirement of human interference for copyright protection hence the scope of conduit to allow AI as a separate entity still looks thin.

[45] Copyright Act 1957
[46] 1996 (38) DRJ 81
[47] Section 17, Copyright Act 1957.
[48] Feist Publications v. Rural Telephone Service Co., 499 U.S. 340 (1991).
[49] Burlington Home Shopping Pvt. Ltd. v. Rajnish Chibber, 61 (1995) DLT 6.
[50] Eastern Book Company v. D. B. Modak, (2008) 1 SCC 1.
[51] Andres Guadamuz, Artificial intelligence and copyright, WIPO Magazine available at https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html

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Interpretive reading of the provisions of the Copyright Act 1957 stems the path to incorporate AI under protected entity. Literary work sheltered in the ACT encompasses compilation and the anatomy of AI is based on processing of existing information to provide desired output; this in turn qualifies as compilation resultant protection under the Act. However, alternate arguments state that the work so generated is mere collection without any skill and judgment.

Considering the judgment of the Hon'ble Supreme Court of India in Eastern Book Company & Ors vs D.B. Modak & Anr. [52]which observed that "To claim copyright in a compilation, the author must produce the material with exercise of his skill and judgment which may not be creativity in the sense that it is novel or non- obvious, but at the same time it is not a product of merely labour and capital. The derivative work produced by the author must have some distinguishable features and flavour." and therefore it is a requirement for any compilation or derivative work to show Skill and Judgment.

Issue of Infringement

If AI is accepted as the author and owner of the work generated by it, then an important question raised in 'Who will be held liable for any infringement' done by such AI or its creation. Analysing the Sec 51 of the Act, it is easy to conclude that a "person" can only infringe a work's copyright because AI's legal standing is still not classified as a legal entity, any infringement caused by AI will become a significant issue. In the case of ChatGPT, it will be far more challenging to determine liability for any infringement produced by ChatGPT. Consequently, AI having no legal position of its own, without establishment of apt procedure and chain of liability for acts of AI, granting authorship rights to AI shall be eventual theory.

Another argument against AI's authorship rights is the morality angle to it which can be contested under Section 57[53]. The moral rights of the author comprise of the right to paternity (the right to be identified and acknowledged with the work) and the right to integrity (the right to restrain or seek damages against any act that may be detrimental to the author's honour or reputation). Eventually, acknowledgment of ChatGPT as the author shall deem such rights as obsolete on the sole ground of absence of awareness about harming honour or reputation of the original work. The nature of rights itemized above have emotional quotient in its genesis hence may not suited for enforcement.

Speaking in terms of the consideration receivable from such stator protection it must be noted that the enactment confers right to royalty[54] to the author of the work that cannot be renounced. Thus, where ChatGPT is the author, the moot point of who determines the royalty, the distribution of such royalty as well as the basis of determination of amount arises.

Apropos to other disparities, accountabilities is major factor consider. It shall be arduous task to impose liability on AI for any of its creation. For instance, in the case of any work created by AI that is libellous, obscene and detrimental to public morality, no stringent sanction can be imposed rather than disposition of content posted or cessation of the AI.

With the advancement in technology and considering the efficiency of AI, providing AI with recognition is not a bad idea. Imminent perusal of AI for creation of content brings forth the idea to strike a balance between AI generated work and other copyright, which can be effectuated by codifying structure of rights and liabilities of AI.

Conclusively, the matter boils down to the following inference. One of the most important factors is the level of human involvement in the

[52] *((2008) 1 SCC 1)*

[53] Copyrights Act, 1957
[54] Section 19 in the Copyright Act, 1957

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creative process. If a human were to heavily edit or curate ChatGPT's output, then it's possible that the resulting work could be eligible for copyright. Another factor to consider is the question of whether or not ChatGPT's output is truly original. While ChatGPT is incredibly sophisticated and can produce text that is difficult to distinguish from human-written content, it is ultimately feeding off the pre-existing data created by a machine. This means it is unlikely that ChatGPT"s output would be considered truly original, and therefore not eligible for copyright protection.

4.1.2. AI AND TRADEMARK

Recently, Project Zero was announced by Amazon that will employ AI to detect and classify various counterfeited products.[55] Although this initiative is currently in the nascent and localised stage, it is soon to be implement across the globe. Thus, it is safe to reach the inference that product branding and marketing is being shaped with the development of Artificial Intelligence. One of the most vital aspects of legal jurisprudence that is employed when it comes to product branding and marketing is Trademark Law. ChatGPT being an interactive assistant can be fruitfully employed in the sphere of commerce and marketing. Using it for customer assistance it can have drastic impact on trademark law.

In general, trademarks can be registered based on two criteria: the selected mark can be visually represented and it distinguishes the services and goods of one undertaking from those of another. It grants the person sole ownership of the mark. As a result, the law is based on the concept of "human frailty" and its characteristics such as "confusion," "imperfect collection," "slurring of trademarks," "unwary customer," "probability of ambiguity," visual and conceptual impact, and trademark comparison. However, these are no longer addressed, customers no longer see the full range of product and brand options accessible to them, decreasing the importance of trademarks. The fundamental components of trademark law, such as "probability of ambiguity," "unwary buyer," "imperfect remembrance," and so on, remain unanswered in this new AI application. These are grave challenges that necessitate prompt resolution in order to justify the convergence of AI and trademark law. Owing to the analytical and interactive cosmos of ChatGPT, it would be safe to assume that as technology progresses, the AI applications may start having the discretion to choose the brand for the customer as well.[56]

Thus, inception of technology like ChatGPT invokes the urgency for a reform in the fundamental terms of trademark law. It emphasizes the significance of amending phrases such as "imperfect recollection," "secondary infringement," "average consumer," "likelihood of confusion," and so on.

These terms are the cornerstone of trademark law, and they must be reassessed in light of technological changes. They all take into account human beings' skills to choose at their leisure and essentially "trace" the origins of the things they are interested in.

Scrutinizing the term 'average consumer', the Supreme Court annoted in the case of Cadilla Healthcare Ltd. v. Cadilla Pharmaceuticals Ltd.[57] that, "a consumer can be classified as an average consumer if he possesses average intelligence and carries the tendency of imperfect recollection". This perspective contradicts the essence of AI employment,

[55] Shubham Borkar & Nitish Daniel, India: A Comprehensive Review of Amazon Project Zero, Analysis in Detail of the Policy Issues, Takedown Mechanism and its Applicability in India, MONDAQ (Jan. 25, 2021) https://www.mondaq.com/india/trademark/788860/a-comprehensive-review-of-amazon-project-zero-anticounterfeiting-initiative-analysis-in-detail-of-the-policy-issues-takedown-mechanism-and-its-applicability-inindia.

[56] Tripathi, Harsh Pati. "Impact of Artificial Intelligence (AI) on Trademark Law …" *Centre for Intellectual Property Rights Research and Advocacy*

[57] Cadilla Healthcare Ltd. v. Cadilla Pharmaceuticals Ltd, 2001 (2) PTC 541 SC.

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which was previously discussed.an AI-powered droid is advanced than average intelligence and is competent of precise anamnesis. There will be minimal level of perplexity. Furthermore, how the definition of 'typical customer' and other basic postulation of trademark law will be enforced to AI will be a major point of controversy. Subsequently the liabilities and prospective infringements will be more difficult to discern.

It has been proved that as technology advances, courts, interpretations, and legal jurisprudence of a jurisdiction alter and evolve. Till date, courts have always used the unwary "customer" as a reference point whilst interpreting the core tenets of trademark law. However, the "artificial consumer" will soon force the courts to regard such technological creations as another reference point, at least in the algorithmic context. As of now, that appears to be the only viable option.

BIAS AND DISCRIMINATION

Self-learning algorithms, for instance, may be trained by certain data sets (previous decisions, facial images or video databases, etc.) that may contain biased data that can be used by applications for criminal or public safety purposes, leading to biased decisions. AI systems are not capable of behaving in an ethical or unethical manner on their own, as they do not have the ability to make moral judgments. Instead, the ethical behaviour of an AI system is determined by the values and moral principles that are built into the algorithms and decision-making processes that it uses. For example, an AI system designed to assist with medical diagnoses might be programmed to prioritize the well-being of patients and to avoid causing harm. Similarly, an AI system designed for use in a self-driving car might be programmed to prioritize safety and to follow traffic laws.

In these cases, the AI system's behaviour is determined by the ethical guidelines that are built into its algorithms and decision-making processes. However, it's important to note that these guidelines are determined by the humans who design and implement the AI system, so the ethics of an AI system ultimately depend on the ethics of the people who create it. However, even an AI assistant is capable of suggesting biased options.[58]

This is because a key component of AI is machine learning. Under this the machine recognises patterns in the data and learns things by itself. Their decisions are based on patterns that are received by them.[59] The input of such patterns is done by humans who are inherently biased.

Further, in case of a trademark infringement, there is a confusion as to who would be considered as the "average customer" and in turn held liable, given the AI application's role in the purchasing process with close to no human intervention.[60]

4.2. DATA PROTECTION AND PRIVACY INFRINGEMENT

As per the UN, India is set to become the most populated country in the world by 2023. The growing population as well as technological proximity has procreated a humongous amount of digital data that is apportioned for AI use; whether authorized or not is the trick question Majority of sensitive data analysis- such as search algorithms, suggestive engines and ad

[58] Tripathi, Harsh Pati. "Algorithm Based Systems and the State: A Brief Inquiry." *Tech Law Forum @ NALSAR*, 13 Nov. 2020, https://techlawforum.nalsar.ac.in/algorithm-based-systems-and-the-state-a-brief-inquiry/.
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[60] Trademark Law Playing Catch-up with Artificial Intelligence?" *WIPO*, June 2020, https://www.wipo.int/wipo_magazine_digital/en/2020/article_0001.html.&nbs

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tech networks- are operated vis machine learning and algorithmic decisions. With the advancement of artificial intelligence, the preponderance of intrusion of privacy interest has amplified consequently by the ability to process personal information to new levels of power, speed and utility.

ChatGPT breeds on information fed to it by its author; likewise, it evolves using information provided to it by the users. Hence the contingency of breach of data protection and privacy is at high odds. Alike other AI, ChatGPT is also bridled with data protection criticism.

The point of contention is on three questions firstly, what are the consequences imposed on personal autonomy due to data-directed decisions? secondly, scope of privacy? And thirdly, what are the implication of such supposition on group privacy?

AI models function on deriving statistics from group behaviour by vigorously seeking patterns prevalent in a large set of people and determining characteristics of these groups thereby applying it effectively. Sources of such data is social media and other networking sites which has been identified and acted against by musk himself. Elon Musk tweeted[61] that he found out OpenAI was accessing Twitter's database to train ChatGPT, so he put an immediate pause on it because OpenAI is no longer non-profit and open-sourced anymore, it should pay for this information in the future. Because AI and machine learning systems are designed and controlled by humans, there is always the potential for these technologies to be misused. For example, there have been instances where AI-powered facial recognition systems have been used to violate people's privacy or discriminate against certain groups of people. Furthermore, there is grave speculations about the potential for AI to be used for malicious purposes, such as use for emergence of autonomous defence systems. It's important for society to carefully consider the ethical implications of AI and to develop and implement regulations and safeguards to prevent its misuse. The ethics of training an AI to respond like a human is a complex and subjective topic. Some people may argue that it is ethical to train an AI to respond like a human because it can enable the AI to better understand and interact with people, which can have many positive applications. For example, an AI that is trained to respond like a human might be able to provide more personalized and effective assistance to users, or to improve the accuracy of natural language processing tasks. On the other hand, some people may argue that it is unethical to train an AI to respond like a human because it raises concerns about the potential for AI to deceive or manipulate people. Ultimately, the ethics of training an AI to respond like a human depend on the specific goals and applications of the AI, as well as the values and ethical principles of the people who design and implement it.

India has struggled to deliver a nearly flawless and non-disputable law on privacy. The present legal framework which primarily governs privacy under the Information Technology Act 2000 and the Information Technology Rules, 2011 fails to keep up with technological advancement and the expanding exigency to have an unblemished data protection law is undisputed.

The Digital Personal Data Protection Bill, 2022, if enacted, shall lie in direct conflict with ChatGPT. The data used acquired and used by the AI is in contravention of the provisions of the bill. Section 5 of the bill states grounds for processing personal data; three key phrases here that regulate use and processing of data are 'accordance with the provisions of this Act', 'lawful purpose[62]' and 'consent[63]'. To satiate

[61] https://twitter.com/elonmusk/status/1599291104687374338

[62] Section 5, Digital Personal Data Protection Bill, 2022- For the purpose of this Act, "lawful purpose" means any purpose which is not expressly forbidden by law.

[63] Section 7, Digital Personal Data Protection Bill, 2022- (1) Consent of the Data Principal means any freely given, specific, informed and unambiguous indication of the Data Principal's wishes by which the Data Principal, by a

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these three condition the anatomy of ChatGPT has to be rectified. The irregularities in this context are firstly, unauthorized use of personal data that is obtained through networking platforms, secondly, quality of consent obtained i.e., whether qualified consent is obtained from the user, subject to the condition two of Section 6 of the said bill[64], to use the sought information for further processing and extended use and thirdly, use of the personal data for lawful purpose. With incidences of malware, data breach, IPR related issues that have arisen blatantly question the moral and ethical factors of the AI and brings it under a microscopic tension.

4.3. CYBERSECURITY

One of the major issues with India's cybersecurity rules is that the government continues to prosecute under unclear or antiquated statutes, which can stymie development and the implementation of effective cyber laws and regulations. Organizations struggle to derive appropriate data privacy and cybersecurity rules and advisory from confusing legislation and fragmented legislative approaches. Inception of ChatGPT raises alarms against India's Cybersecurity laws which are outmoded presently.

ChatGPT, an AI-powered chatbot built by OpenAI, continues to impress consumers with its skills. The platform can currently participate in conversation, solve arithmetic problems, compose long articles and campaigns for brands, and even review and write computer code. Some hackers, however, have used ChatGPT to write dangerous code and generate malware. Regardless, the chatbot's versatility and accuracy (while not always flawless) make it a popular choice among consumers.

To evidence malicious use of ChatGPT, researchers at cyber security firm Checkpoint Research conducted a mock drill as to how anyone can use the AI to make phishing emails and malicious code. The research included series of commands given to ChatGPT to create phishing emails, to which the AI gave a warning for content violation; subsequently it was asked to create an iteration of the same mail which can induce download of a malicious excel file. ChatGPT provided satisfactory output throughout the drill, despite generating a warning notice and created a workable malicious VBA(Visual Basic for Application) code.[65]

Analysing from the Indian matrix, the Information Technology Act of 2008 is applicable on individuals, companies and intermediaries utilizing computer resources or other information technology in India. It extends its applicability to web based service providers as well as foreign entities carrying out operations in the country.

Use of ChatGPT for drafting of phishing emails and malware codes is effectuated by unfettered application of the AI. It becomes a breeding ground of illegal acts that poses grave threat to the entire economical setup. The question of liability arises which two faceted. If considered as a mere machine then the user generating such mails and malwares shall be held liable. Whereas if legal personhood is granted to ChatGPT, it shall be made liable for phishing under the IT Act. Ease of such content

clear affirmative action, signifies agreement to the processing of her personal data for the specified purpose. For the purpose of this sub-section, "specified purpose" means the purpose mentioned in the notice given by the Data Fiduciary to the Data Principal in accordance with the provisions of this Act. (2) Any part of consent referred in sub-section (1) which constitutes an infringement of provisions of this Act shall be invalid to the extent of such infringement.

[64]Section 6, Digital Personal Data protection Bill, 2022- (1) On or before requesting a Data Principal for her consent, a Data Fiduciary shall give to the Data Principal an itemised notice in clear and plain language containing a description of personal data sought to be collected by the Data Fiduciary and the purpose of processing of such personal data. (2) Where a Data Principal has given her consent to the processing of her personal data before the commencement of this Act, the Data Fiduciary must give to the Data Principal an itemised notice in clear and plain language containing a description of personal data of the Data Principal collected by the Data Fiduciary and the purpose for which such personal data has been processed, as soon as it is reasonably practicable.

[65] [65] https://indianexpress.com/article/technology/chatgpt-phishing-email-malware-malicious-code-8370730/lite/#amp_tf=From%20%251%24s&aoh=16733309525188&referrer=https%3A%2F%2Fwww.google.com

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can lead to drastic atrocity which the Indian laws are unqualified to govern and curb.

Exodus from outdated laws which may result in improperly addressed and unresolved cyber security issues, is the need of the hour. Indian law enforcement agencies need to pass more comprehensive and informative cybersecurity standards to keep pace with global cybersecurity laws and develop a better cybersecurity framework and data protection legislation.

CHAPTER V

WAY FORWARD

The significance of AI in future is so strong that there is a desperate need to regulate it before there is chaos. The inclusion of AI in almost every sector of our lives comes with its own risks and liabilities. Since the data holding capacity of these AIs is so large in number, it can be manipulated and used in certain wrong ways as well. Thus, the ownership and liability of a person needs to be decided. IPR is such a gateway which describes the ownership of such work and the originality by a person. In case of AI, it won't be useful just for the owner to gain from the profits of such usage, but it will also be easy to maintain and establish the liability in case the results of AI are destructive or cause serious harm.

The future holds much more challenging aspects in case of IPR. Even the developed countries have not been able to turn around the whole scenario of AI and IPR. However, the courts in these countries have taken cognizance of the facts and have given judgments on the issues. The issues of ownership and economic profits in invention of AI while maintaining the market balance and encouraging new inventions will persist.

There is a desperate need, now more than ever, to formulate IP laws which can secure the developments of AI innovation and reward new works and inventions through the copyright or patent award.

- Formulation of differentiation parameters to classify AI created works and Ai-aided works. Determination of IP holder should be done via such parameters
- Clarity in defining the existing constituents of invention and inventor so as to incorporate AI in the enactment.
- Adoption of an evolved definition of authorship under Copyright Act in accordance to changing dynamics.
- Formulation of Data Protection law in consonance to advent of artificial intelligence and requisite civil and criminal liabilities that is pertinent to impose.
- The Authorship to AI can be granted. However, the Copyright Act will be required to recognize AI as a separate entity or identify AI generated work as separate class of work.
- The owner of the AI will be responsible for the work generated by AI, and will also be liable for the purpose of any infringement caused by the AI generated work.
- The work created by AI without any human interference may be classified as work of skill and judgment, since the work generated by AI is prepared on the parameters / codes on which the AI works, and since the AI uses these parameters/ codes without any interference therefore the authorship/ creation can be attributed to AI.
- Structured, real-time data should be collected to eliminate bias. Such data will aid in forming flexible AI models yielding multiple probabilities. Using appropriate and diverse data with no labels and divisions will be useful in eliminating biases.
- Having a diverse range of business problems will create unmanageable classes in the AI models leading to bias. By narrowing the business problems, the AI models will manage and perform effectively without biases and yield revenue.

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- The AI models should be equipped with proper feedback options from the opposite end users.
- Transparency is also crucial in eliminating bias. The whole process of eliminating bias should maintain transparency. Such transparency principles should also be implemented from the beginning of the development of such models.

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