



ARTIFICIAL INTELLIGENCE AND ITS EVOLVING RELATIONSHIP WITH CYBER LAWS IN INDIA

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Abstract

Artificial Intelligence (Referred to as AI herein after) has rapidly emerged as a trans formative technology, influencing various aspects of our lives. In India, the integration of AI has been substantial, impacting industries such as healthcare, finance, and education. However, with this technological progress comes the need for a robust legal framework to address the ethical, privacy, and security concerns associated with AI.

AI has witnessed exponential growth in India, permeating various sectors and transforming the way businesses operate. This surge in AI usage has spurred the need for a robust legal framework that addresses the complex challenges and implications of AI technology, especially in the realm of cybersecurity. This research article delves into the evolving landscape of AI and cyber laws in India, analyzing key legal instruments and highlighting critical issues and future considerations.

Keywords: AI, Cyber security, Chat GPT, Privacy, Cyber law, Super AI.

I Introduction

THE FUTURE is evolving digital at an astounding speed, and the transition is only likely to get faster. Digitization means that everything is moving at a lightning pace – industry, media, fashion, new services, and so on. The customer gets what he or she wants immediately because the service provider has the ability to offer that.¹ India has witnessed

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significant advancements in AI, with a burgeoning startup ecosystem and increased investment in AI research and development. The adoption of AI technologies has led to improved efficiency, better decision-making, and enhanced customer experiences in various sectors. However, AI also presents unique challenges that require legal attention. These challenges include data protection, algorithmic bias, accountability, and transparency. To address these issues, Indian lawmakers have been working to amend and create new cyber laws that account for AI-specific concerns.



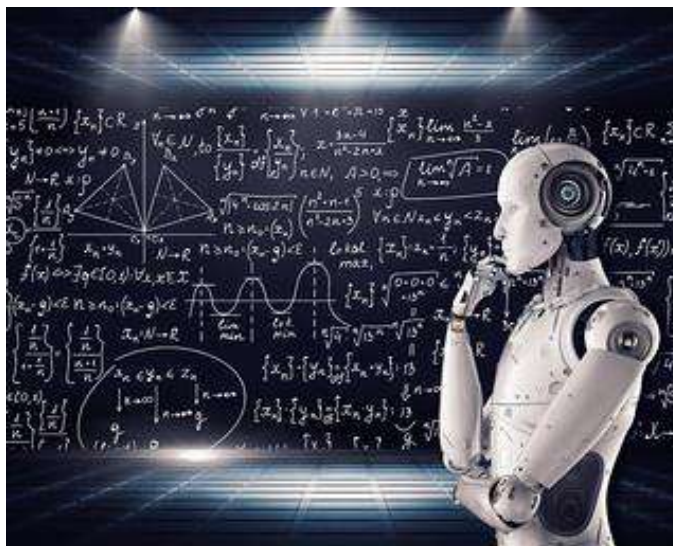
India has emerged as a global hub for AI innovation and development. The augmentation of AI technologies across industries has brought unrivalled benefits and challenges, necessitating a closer examination of the existing cyber laws and their relevance in the AI era.

AI the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, or learn from past experience. Since the development of the digital computer in the 1940s, it has been demonstrated that computers can be programmed to carry out very complex tasks—such as discovering proofs for mathematical theorems

¹ Karan Upadhyaya, Artificial Intelligence, The Indian Legal perspective .
available at: <https://blog.ipleaders.in/artificial-intelligence-cyber-law/> (Visited on October 4, 2023).

or playing chess—with great proficiency. Still, despite continuing advances in computer processing speed and memory capacity, there are as yet no programs that can match full human flexibility over wider domains or in tasks requiring much everyday knowledge. On the other hand, some programs have attained the performance levels of human experts and professionals in performing certain specific tasks, so that artificial intelligence in this limited sense is found in applications as diverse as medical diagnosis, computer search engines, voice or handwriting recognition, and chatbots.²

AI is a broad field that encompasses many different disciplines, including computer science, data analytics and statistics, hardware and software engineering, linguistics, neuroscience, and even philosophy and psychology etc.³



² B.J Copeland, Development and applications of artificial intelligence. *available at:* <https://www.britannica.com/technology/artificial-intelligence> (Visited on October 4, 2023)

³ George Lawton, Generative AI experiences in India. *available at:* <https://cloud.google.com/learn/what-is-artificial-intelligence> (Visited on October 5, 2023)

II Types of Artificial Intelligence

AI can be divided into three widely accepted subcategories: narrow AI, general AI, and super AI.

Narrow Artificial Intelligence

Artificial narrow intelligence (referred to as ANI hereinafter) is crucial to voice assistants, such as Siri, Alexa, and Google Assistant. This category includes intelligent systems that have been designed or trained to carry out specific tasks or solve particular problems, without being explicitly designed to do so.⁴

ANI might often be referred to as weak AI, as this variant of artificial intelligence doesn't seem as reliant as others, but some examples of the power of narrow AI include the above voice assistants, and also image-recognition systems, technologies that respond to simple customer service requests and commands, tools that produce inappropriate content online.

Chat Generative Pre- Trained Transformer (referred to as ChatGPT hereinafter) is an example of ANI and the same was developed by an AI Research and one of the well-known companies Open AI. Chat GPT is a technology and advancement which can process our natural human language and generate a response in return.⁵

⁴ Nicole Laskowski, What is Artificial Intelligence? *available at* : <https://www.zdnet.com/article/what-is-ai-heres-everything-you-need-to-know-about-artificial-intelligence/> (Visited on October 2, 2023).

⁵ Amanda Hetler, Vision And health Blog, *available at*: <https://lighthouse.guild.org/what-chatgpt/#:~:text=Chat%20GPT%20stands%20for%20Chat,language%20and%20generate%20%20response> (Visited on October 9, 2023)

Artificial General Intelligence

Artificial general intelligence (referred to as AGI hereinafter), also known as strong AI, is still a hypothetical concept as it involves a machine understanding and performing vastly different tasks based on its accumulated experience. This type of intelligence is more on the level of human intellect, as AGI systems would be able to reason and think like a human.

Like a human, AGI would probably be able to acknowledge any cognitive task, deliberate abstractly, acquire knowledge from its experiences, and use that knowledge to solve newly discovered problems. Essentially, talking about a system or machine capable of common sense, which is currently not achievable with any form of available AI.⁶

Artificial Super Intelligence

Artificial super intelligence (referred to as ASI hereinafter) is a system that wouldn't only rock humanity to its elemental depths, but could also pulverize the same. If that sounds straight out of a science fiction novel, it's because it kind of is: ASI is a form of AI that is capable of surpassing human intelligence by manifesting cognitive skills and developing thinking skills of its own. Also known as super AI, artificial super intelligence is considered the most advanced, powerful, and intelligent type of AI that transcends the intelligence of some of the brightest minds, such as Albert Einstein.⁷

Most Eminent Instances of AI Are

Overall, the most notable advancements in AI are the development and release of GPT 3.5 and GPT 4. But there have been many other

⁶ *Supra* note 4.

⁷ *Ibid.*

comprehensive procurement in artificial intelligence -enormous, in fact, to include all of them here. Here are some of the most remarkable:

ChatGPT

ChatGPT is a composite device learning model that is able to fetch out natural language generation (referred to as NLG hereinafter) tasks with such a high level of precision that the model can pass a Turing Test a test where there is evaluation about how well the AI model which is being developed can think and work as well as accountable like a Human. ChatGPT was trained on massive amounts of unlabeled data scraped from the internet before 2022. The model is continually being monitored and fine-tuned for specific language-oriented tasks with additional datasets labeled by humans.⁸



Tasks ChatGPT excels at include:

- a) Providing answers to questions;
- b) Completing a given text or a phrase ;
- c) Writing fiction and non-fiction content from prompts;
- d) Producing human like chat-bot responses;
- e) Generating computer code;
- f) Translating the text from one language to another;

⁸ Margaret Rouse, What is ChatGPT? *available at*: <https://www.techopedia.com/definition/34933/chatgpt>(Visited on October 9, 2023).

- g) Performing calculations;
- h) Summarizing a given text;
- i) Classifying text into different categories;
- j) Analyzing text sentiment;
- k) Generating text that summarizes data in tables and spreadsheets;
- l) Responding to user input in a conversational manner.

The model was developed by OpenAI, a research firm founded by Elon Musk.⁹

Self Driving Cars

Self-driving cars use artificial intelligence to make real-time decisions based on the data they gather from their sensors. For example, if a self-driving car detects a pedestrian crossing the road, it will use AI to determine the best course of action, such as slowing down or stopping.¹⁰

Though the safety of self-driving cars is a top concern of potential users, the technology resume to assist and upgrade with quantum leaps in AI. These vehicles use machine-learning algorithms to combine data from sensors and cameras to adjudge their adjoining area and determine the best course of action. Tesla's autopilot feature in its electric vehicles is probably what most people think of when considering self-driving cars, but Waymo, from Google's parent company, Alphabet, makes autonomous rides, like a taxi without a taxi driver, in San Francisco, CA, and Phoenix, AZ. Cruise is another robotaxi service, and auto companies

⁹ *Supra* note 8.

¹⁰ Kerem Gülen, A match made in transportation heaven : AI and self- driving cars, *available at* : <https://dataconomy.com/2022/12/28/artificial-intelligence-and-self-driving/#:~:text=Self driving % 20 cars % 20 use % 20 artificial, as % 20 slowing % 20down % 20 or% 20> (Visited on October 7, 2023)

like Apple, Audi, GM, and Ford are also presumably working on self-driving vehicle technology.¹¹

Deep mind

Google sister company DeepMind is an AI pioneer making headway toward the paramount holy grail of AGI. Deep learning is a technique in AI that instructs computers to activate data in a manner that is inspired by the human brain. Deep learning models can concede complex patterns in pictures, text, sounds, and other data to produce accurate perception and prognosis. You can use deep learning methods to automate assignments that typically require human intelligence, such as describing images.

III Scientific Forms of Artificial Intelligence

AI can be divided into four categories, based on the functions and complexity of the tasks a system is able to perform.

Reactive Machines

A reactive machine follows the most cardinal AI principles and, as its name implies, is capable of only using its intelligence to discern and respond to the world in front of it. A reactive machine cannot accumulate a memory and, as a result, cannot rely on past experiences to inform settlement in real time. It is understood that reactive machines are designed to complete only a limited number of specialized duties. Intentionally narrowing a reactive machine's worldview has its benefits, however: This type of AI will be more trustworthy and reliable, and it will react the same way to the same stimuli every time.¹²

¹¹ *Supra* note 10.

¹² Bernard Marr, Understanding four types of Artificial Intelligence, *available at*: <https://www.linkedin.com/pulse/understanding-4-types-artificial-intelligence-ai->

Deep Blue was designed by International Business Machine (referred to as IBM hereinafter) in the 1990s¹³ as a chess-playing supercomputer and defeated international grand master Gary Kasparov in a game. Deep Blue was only capable of identifying the pieces on a chess board and knowing how each moves based on the rules of chess, acknowledging each piece's present position and determining what the most logical move would be at that moment. The computer was not pursuing future potential moves by its opponent or trying to put its own pieces in better position. Every turn was viewed as its own reality, separate from any other movement that was made beforehand.

Google's AlphaGo is also incapable of evaluating future moves but relies on its own neural network to evaluate developments of the present game, giving it an edge over Deep Blue in a more complex game. AlphaGo also bested world-class competitors of the game, defeating champion Go player Lee Sedol in 2016.

Limited Memory

Limited memory AI has the ability to reserve precipitate previous data and predictions when assembling particulars and weighing potential decisions and fundamentally gaze into the past for indication of on upcoming Limited memory AI is more composite and presents greater probabilities than reactive machines. Limited memory AI is created when a team continuously trains a model in how to scrutinize and avail oneself new data or an AI environment is built so models can be impulsively trained and resumed.¹⁴ When utilizing limited memory AI in Machine Learning, six steps must be followed:

bernardVomarr#:~:text= These%20four%20types%20 aren't,mind%2C% 20and% 20 self %2Daware. (Visited on October 10,2023).

¹³ *Supra* note 12.

¹⁴ *Ibid.*

- a) Establish training data
- b) Create the machine learning model
- c) Ensure the model can make predictions
- d) Ensure the model can receive human or environmental feedback
- e) Store human and environmental feedback as data
- f) Reiterate the steps above as a cycle

Theory of Mind

Theory of mind is just that theoretical. We have not yet attained the technological mechanism and scientific proficiency inevitable required to outreach this next level of AI.

The concept is based on the psychological premise of understanding that other living things have thoughts and emotions that affect the behaviour of one's self. In terms of AI machines, this would mean that AI could comprehend how humans, animals and other machines feel and make decisions through self-reflection and determination, and then utilize that information to make decisions of their own. Essentially, machines would have to be able to grasp and process the concept of "mind," the fluctuations of emotions in decision-making and a litany of other psychological concepts in real time, creating a two-way relationship between people and AI.¹⁵

¹⁵ Kislay Keshari, Artificial Intelligence Tutorial: All you need to know about AI .
available at: <https://www.edureka.co/blog/types-of-artificial-intelligence/> (Visited
on October 9 2023)