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# FUTURISTIC & NOVEL CHALLENGES OF PERSONIFICATION OF AI: POST COVID

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## ABSTRACT

Post demonetisation, the sudden outbreak of novel coronavirus took the globe by storm. Aftermath, it left evil impacts on the economy, and social life was not just enough; it also impacted the work of legal sectors. Parallel to this digitalisation, another development of artificial intelligence is going on. Can AI become the alternative to digitalisation, especially during a pandemic like COVID-19? How can AI aid digitalisation and prevent fraud, scams, discrimination, etc.? These have also broadened the scope of personification of machinery and legal liability and regulation of intelligent beings under the present legal system. Due to the Large Language Mode (LLM), the requirement of a new pronoun for AI to distinguish it from a human being for security and protection of rights and ethics was recently questioned. With ethical and moral challenges, the consequences of the development of Generative AI are another point of debate now. Recently, the CHAT GPT has been blocked by major news agencies and newspapers like The New York Reuters and CNN due to monetary losses and IPR violations. In India, several news channels have introduced AI-based news anchors.

On the other hand, one tiding recently showed that AI cameras had been used to catch the vehicles of VIPs, including MPs and MLAs, for serious traffic offences. The health ministry used AI to tackle millions of frauds in the Ayushman Bharat. However, several high courts disagreed with accepting AI as the basis for adjudicating legal issues. How to regulate AI is a crucial issue for the Indian Legal System.

**Keywords:** Novel Coronavirus Outbreak, Economic Impact, Legal Sector, AI During Pandemic, Fraud Prevention Scams, Discrimination Personification, Large Language Models (LLMS), AI-Based News Anchors, AI Cameras For Traffic Offences, AI in Healthcare, Ayushman Bharat, Fraud Detection

## 1. INTRODUCTION

In addition to being a unique and novel virus, the coronavirus presents unknown difficulties in the present time. Not just the health sector nor the economic sector but nearly every area, including the legal industry, is facing new challenges. Social distancing was only the most effective strategy for controlling Corona's plight.

These all compel the situation to be digitalised and virtualised to keep the working of society and system functional. The pace of digitalisation, which was fastened post-launch of Jio, got manifold speedier after COVID-19. Unfortunately, the plan was ill-prepared and lacked the necessary resources to implement it meticulously. This optimal choice of quarantine and digitalisation is tainted with numerous unavoidable negative aspects due to its chaotic approach and sudden outbreaks. Parallel to this digitalisation, another development of artificial intelligence is going on. This has also broadened the scope of personification of machinery and legal liability and regulation of intelligent beings under the present legal system. Can artificial intelligence and other intelligent beings take place as an alternative to digitalisation, especially during a pandemic like Covid 19? How can artificial intelligence and other intelligence legally aid digitalisation and curb frauds, scams, etc.? Will artificial intelligence replace human resources during upcoming situations, especially during a pandemic, to keep the system functional?

In this paper, the author will consider one of the cutting-edge problems facing the legal industry in artificial intelligence and other intelligent beings.

Using keywords has become a necessary skill in conducting Internet searches, whereas the successful completion of LLM programs necessitates proficiency in understanding and responding to prompts. Prompts refer to user-generated queries and instructions provided by software programmers designed to elicit a specific answer from the algorithm. The engineering field is experiencing a growing demand for professionals specialising in training Chatbots to emulate the behaviours and capabilities of efficient human people.

The imitation game, initially conceived by computer scientist Alan Turing, serves as a method to evaluate a machine's capacity to exhibit intelligent behaviour that is indiscernible from that of a human.[1] In the context of our voluntary suspension of disbelief, can humans overlook that we are engaging in conversation with artificial intelligence? Indeed, there is a tendency to anthropomorphise the model in certain instances. In certain cases, there will be instances where our knowledge is limited, and the computer would have completed the Turing test. The potential impact of anthropomorphous chatbots on our perception of reality may extend beyond emotional or financial vulnerabilities.[2]

## 2. IDENTIFICATION AND PERSONIFICATION OF AI: PRONOUN, ETHICS AND MORALITY.

After 2017, when Saudi Arabia granted an artificially intelligent being named Sophia the status of Citizenship[3] with her passport[4], the issue of personification and liabilities of intelligent beings became significant. In 2020, during the tour of 65 countries, Sophia also visited Kolkata, India.[5]

But during the same time, in 2017, The European Parliament proposed the concept of **electronic personhood** as a legislative measure aimed at regulating the advancement and utilisation of artificial intelligence.[6] This phrase encompasses the establishment of rights and responsibilities for highly advanced computers. Nevertheless, there exists a divergence of opinions among specialists regarding the optimal approach, with concerns raised by many individuals over the potential infringement upon human rights that could arise from bestowing human citizenship upon robots.[7]

In 2018, 150 experts in health, robotics, artificial intelligence, and ethics of the European Union collectively characterised these concepts as unethical, ideological, irrational, and non-pragmatic.[8] These experts conveyed their assessment through an open declaration sent to the European Commission.[9]

The first AI-based anchor, Soundarya, was introduced by a New channel, Power TV, of the Kannada language in India.[10] In March 2023, The India Today company unveiled Sana, India's first artificial intelligence news presenter for their Hindi channel named Aaj Tak.[11] Later, the first AI-based robotic news presenter (Lisa) of the regional language Odia and English in India was introduced by the regional news channel OTV.[12]

In another sector, the Artificial Intelligence (AI)-enabled video surveillance system has identified and recorded traffic offences committed by the vehicles belonging to 19 MLAs and MPs.[13] The utilisation of Artificial Intelligence (AI)

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[1] Shalini Verma, *A Case for a New Pronoun for AI*, THE HINDU, Jul. 23, 2023, https://www.thehindu.com/opinion/op-ed/a-case-for-a-new-pronoun-for-ai/article67113358.ece.

[2] *Id.*

[3] Saudi Arabia grants robot citizenship – DW – 10/28/2017, DW.COM, https://www.dw.com/en/saudi-arabia-grants-citizenship-to-robot-sophia/a-41150856.

[4] Should robots be citizens? | British Council, https://www.britishcouncil.org/anyone-anywhere/explore/digital-identities/robots-citizens.

[5] Meet Sophia, world's first humanoid robot citizen, in Kolkata - World's first robot citizen, THE ECONOMIC TIMES, https://economictimes.indiatimes.com/news/science/meet-sophia-worlds-first-humanoid-robot-citizen-in-kolkata/worlds-first-robot-citizen/slideshow/74254514.cms.

[6] Verma, *supra* note 1.

[7] *Id.*

[8] *Id.*

[9] *Id.*

[10] The Hindu Bureau, *Soundarya, Kannada's First AI News Anchor Debuts on Power TV*, THE HINDU, Jul. 14, 2023, https://www.thehindu.com/news/national/karnataka/soundarya-kannadas-first-ai-news-anchor-debuts-on-power-tv/article67079375.ece .

[11] *Id.*

[12] Meet Lisa, India's first AI bot that reads news in English, Odia, FE TECH BYTES (Jul. 10, 2023), https://www.financialexpress.com/life/technology-meet-lisa-indias-first-ai-bot-that-reads-news-in-english-odia-3163360/.

[13] The Hindu Bureau, *19 MLAs, 10 MPs Caught in Kerala for Traffic Violations in AI Cameras*, THE HINDU, Aug. 3, 2023, https://www.thehindu.com/news/national/kerala/19-mlas-10-mps-caught-for-traffic-violations-in-ai-cameras/article67154835.ece.

and Machine Learning (ML) technologies by the Government of India is employed to identify suspicious transactions or potential instances of **fraud** within the framework of **Ayushman Bharat .**[14]

Contemporary developments of replacing human resources with advanced artificial beings to function human function have raised the issues of unemployment and ethics, legal liability, regulations of parts, morality, rationality, pragmatism, etc. Recently, the Delhi High Court observed that Artificial intelligence (AI) cannot replace human intelligence or the essential human element in the adjudicatory process.[15] Due to economic losses and copyright violations, the New York Times, CNN, and Australia's ABC have implemented measures to restrict access to their content by OpenAI's GPTBot web crawler.[16]

## 2.1. THE ISSUE FOR NEW PRONOUNS TO AI

Artificial Intelligence needs separate pronouns to distinguish its identification from human beings, and it is a person's ethical and security obligation to be aware when interacting with a machine.

The current state of artificial intelligence (AI) chatbots is experiencing a significant and influential period. Large Language Models (LLMs) are increasingly utilised to power chatbots that exhibit conversational abilities comparable to human specialists. These LLM-powered chatbots often outperform even the most skilled individuals in tasks such as summarising intricate concepts or composing essays. The bulleted response provided by ChatGPT exhibits a resemblance to the well-crafted answers often produced by high-achieving students during examinations.

Regulators should take advantage of the opportunity to address this issue early before adopting conventional pronouns for AI. Regulators must collaborate with lexicographers and linguists for an organised strategy to establish a standard for the main languages. Then, style guides can introduce pronoun-related requirements to expedite the development of AI models. Even if we lost our emotional connection with artificial intelligence, we would likely create a trustworthy and transparent cyberspace.

In contemporary times, the discourse within the technology industry has incorporated pronoun usage, with a specific focus on the advancements in modelling that have reached a level of sophistication, enabling them to pass the Turing test successfully. Using first-person neopronouns, such as 'xe' or 'ze', is recommended.[17] Nevertheless, gender-neutral folks are already using them. Hence, developing a distinct set of pronouns specifically tailored for artificial intelligence (AI) is imperative.

## 2.2. GENDER IDENTITY TO AI

Legislators are pondering the issue of whether AI should be accorded legal personhood, and with autonomous devices, this becomes more complicated. However, there is widespread agreement that AI misrepresentation of identity feels manipulative. According to experts, AI mistaken identification could be mitigated by prohibiting the usage of first-person pronouns and other pronouns associated with humans in AI systems. Based on this premise, it would be more straightforward to discern writing solely produced by a machine. The significance of this matter lies in the pivotal position that pronouns assume in contemporary notions of identity.

The utilisation of artificial intelligence (AI) pronouns poses significant difficulties for writers, including individuals such as myself. Even though the usage of the inanimate pronoun 'it' is no longer limited to inanimate nouns, I am tempted to employ it. In fiction writing, authors often rely on traditional gender-specific pronouns while portraying artificially intelligent (AI) beings that possess self-awareness. Nevertheless, it is essential to note that artificial intelligence (AI) does not keep sensitive current affairs.

Earlier, we were only somewhat pleased with the pronouns of the time. In the 1880s, there were fleeting attempts to create and employ a gender-neutral third-person singular pronoun, such as **'thon'**[18], which means **'that one'**. In her

[14] Use of AI for checking frauds under AB-PMJAY, https://pib.gov.in/pib.gov.in/Pressreleaseshare.aspx?PRID=1946706.
[15] Christian Louboutin Sas & Anr. V. M/S The Shoe Boutique – Shutio , 2023 LiveLaw (Del) 755.
[16] Ariel Bogle, *New York Times, CNN and Australia's ABC Block OpenAI's GPTBot Web Crawler from Accessing Content*, THE GUARDIAN, Aug. 25, 2023, https://www.theguardian.com/technology/2023/aug/25/new-york-times-cnn-and-abc-block-openais-gptbot-web-crawler-from-scraping-content.
[17] What are neopronouns and how do you use them? | CNN, https://edition.cnn.com/us/neopronouns-explained-xe-xyr-wellness-cec/index.html.
[18] Dennis Baron, *Thon Was Word of the Year in 1884*, https://blogs.illinois.edu/view/25/597154 (last visited Sep 12, 2023).

1991 thesis, Kelly Ann Sippell[19] provides a comprehensive compilation of gender-neutral pronouns suggested for the singular third person during the last 150 years. This group includes **hes, hiser, hem, ons, e, heer, he'er, hesh, se, heesh, herim, co, tey, per, na, en, herm, em, hir, and shey**.[20] Even so, this list still needs to be completed.

The utilisation of artificial intelligence (AI) pronouns poses significant difficulties for writers, including individuals such as myself. Even though the usage of the inanimate pronoun 'it' is no longer limited to inanimate nouns, I am tempted to employ it. Fiction authors often rely on traditional gender-specific pronouns while portraying artificially intelligent characters that possess self-awareness within their narratives.

Nevertheless, it is essential to note that artificial intelligence (AI) does not possess sentience in the current situation. Siri has male and gender-neutral vocal options, but the default voice is feminine. To cultivate an emotional connection between AI and its users, we give it a gender. This would increase engagement and a robust revenue stream in the long run. Historically, the pronoun 'he' was loosely applied to any pupil, which created the mental image of a male student.

Furthermore, AI requires pronouns to establish a distinct identity from that of humans. Presumably, for **ethical and safety considerations**, it is our right to be informed that we are conversing with a bot. Changes in cultural norms have contributed to the evolution of pronouns in English. As social interactions became less formal in the early modern period, 'you' began to be used for singular and plural second-person pronouns. In literature, the pronoun **'they'** was first used as a unique, gender-neutral pronoun in a French poem from the 14th century.[21]

The gender of AI is optional. Some contend that AI should use gender-neutral pronouns such as 'it' or 'they'.[22] Nevertheless, a non-binary identity could be interpreted as exclusive. As with avatars and emoticons, giving AI a modern pronoun would spur public demand for greater diversity in chatbots.

## 2.3. ISSUES OF MORALITY AND ETHICS:

In contemporary times, there is a growing trend of robots and Artificial Intelligence (AI) playing a pivotal role in aiding human decision-making processes, particularly within the realm of governance. Several nations are implementing rules about artificial intelligence. Government organisations and policymakers use artificial intelligence-enabled systems to analyse intricate patterns, predict future events, and offer more knowledgeable suggestions. Nevertheless, integrating artificial intelligence in decision-making has prospective drawbacks.

The presence of biases inside artificial intelligence systems, which frequently mirror the prejudices present in the training data or the perspectives of its creators, can result in distorted or unfair decisions. This poses a substantial obstacle to the incorporation of AI into governance. The presence of biases in artificial intelligence necessitates a separate article for comprehensive exploration. The focus of this essay pertains to the ethical considerations surrounding artificial intelligence. **Can artificial intelligence possess ethical and moral qualities?** The concept of ethics is being discussed.

### 2.3.1. ETHICAL CHALLENGES

**Immanuel Kant's ethical theory** stresses the concepts of autonomy, rationality, and the moral obligations incumbent upon individuals.[23] The application of Kantian morality to the utilisation of Artificial intelligence in decision-making processes within the realm of governance may give rise to significant apprehensions. Delegating decision-making processes, formerly under the jurisdiction of human agents, to algorithms may jeopardise the ability to engage in moral

[19] The History of "Thon", the Forgotten Gender-Neutral Pronoun, https://www.merriam-webster.com/wordplay/third-person-gender-neutral-pronoun-thon .
[20] *Id.*
[21] A Simple Guide to Gender-Neutral Languages Around The World | Beelinguapp Blog, https://beelinguapp.com/blog/gender-neutral.
[22] Kaveh Waddell, *We Need a New Pronoun for Artificial Intelligence*, THE ATLANTIC (2015), https://www.theatlantic.com/technology/archive/2015/12/we-need-a-new-pronoun-for-ai/420378/.
[23] Robert Johnson & Adam Cureton, *Kant's Moral Philosophy*, *in* THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta & Uri Nodelman eds., Fall 2022 ed. 2022), https://plato.stanford.edu/archives/fall2022/entries/kant-moral/.

reasoning. The individual or organisation employing artificial intelligence may be perceived as relinquishing their ethical obligation. The logic presented in this statement can be observed to resonate with the principles outlined in Isaac Asimov's **'Three Laws of Robotics'**[24]. These are as follows:

*A robot may not injure a human being or, through inaction, allow a human being to come to harm.*

*A robot must obey orders given to it by human beings except where such orders would conflict with the First Law.*

*A robot must protect its existence as long as such protection does not conflict with the First or Second Law.*

The legislation was established to regulate the conduct of robots, focusing on promoting ethical behaviour. However, within Asimov's fictional universe[25], these laws give rise to unforeseen and frequently contradictory consequences. The endeavour to formalise ethical principles into regulations, whether for robots or sophisticated AI-driven systems in government decision-making, exposes the inherent difficulties in converting the intricate nature of human morality into an algorithmic structure.

The convergence of Kant's emphasis[26] on rational moral agency and Asimov's fictional examination[27] of encoded ethics exemplifies the ethical complexities of delegating human responsibilities to artificial beings. Nevertheless, using artificial intelligence (AI) in governance choices is unavoidable. Decision-making algorithms are employed in several nations to ascertain the recipients of social sector initiatives. Nevertheless, the question arises as to how governments can ensure that decisions facilitated by robots maintain their ethical and moral integrity. The field of ethics is characterised by its inherent complexity. Incorporating ethical principles into machine learning algorithms and artificial intelligence systems is intricate.

According to **Dartmouth College scholar James Moore, imbuing a computer with ethical behaviour is far more challenging than programming it to excel at world-champion chess**.[28] The game of chess is characterised by a straightforward domain that consists of clearly defined lawful movements. Ethics operates within a multifaceted realm characterised by certain legal manoeuvres that lack precise definitions.

## 3. RELATIONSHIP OF ARTIFICIAL INTELLIGENCE AS AGENT:

Can computers or artificial intelligence (AI) possess the capacity to act morally, thereby becoming moral agents or artificial moral agents (AMAs)? A substantial corpus of scholarly literature posits that robots can be ethical agents, assuming responsibility for their actions and are often called "autonomous moral agents."

Moore (2006) establishes a taxonomy consisting of four classifications for computer agents concerning ethical considerations[29]. One category of agents that have an impact on ethics is referred to as ethics impact agents. These agents, such as robot jockeys, do not possess the ability to make ethical decisions themselves. Still, they do give rise to ethical considerations by introducing changes to the dynamics of the sport. The second category pertains to implicit moral agents, encompassing machines with inbuilt safety or ethical criteria. For instance, a secure autopilot system installed in an aircraft operates based on predetermined rules without engaging in active ethical decision-making. Explicit moral agents refer to entities that surpass predetermined rules and employ formal methodologies to assess the ethical worth of various choices. These entities encompass systems harmonising financial investments with social accountability, exemplifying a more comprehensive ethical approach. The fourth category includes ethical agents who can formulate and rationalise righteous judgements, accompanied by sound justifications and logical explanations. A mature person can act as a complete moral agent. Thus, an advanced artificial intelligence (AI) with a comparable comprehension of ethics would also exhibit this capability.

Moral disengagement is a fundamental component within the framework of constrained ethical decision-making. It enables individuals to deviate from their ethical principles and engage in actions that contradict their moral compass

[24] Three laws of robotics | Definition, Isaac Asimov, & Facts | Britannica, (2023), https://www.britannica.com/topic/Three-Laws-of-Robotics .
[25] *Id.*
[26] Johnson and Cureton, *supra* note 22.
[27] Three laws of robotics | Definition, Isaac Asimov, & Facts | Britannica, *supra* note 23.
[28] Can AI be moral agent? - The Hitavada, https://www.thehitavada.com/Encyc/2023/9/2/Can-AI-be-moral-agent-.html .
[29] Vincent C. Müller, *Ethics of Artificial Intelligence and Robotics*, *in* THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta & Uri Nodelman eds., Fall 2023 ed. 2023), https://plato.stanford.edu/archives/fall2023/entries/ethics-ai/.

while experiencing a diminished sense of shame. This **psychological process** is facilitated through various tactics, such as moral arguments.

In contemporary times, machine predictions aid decision-making processes, wherein a human decision-makers final decision-making authority remains vested. In due course, governmental authorities may opt to assign a limited number of fundamental decisions to automated systems. However, if a choice is made based on machine projections or by a machine itself, there is a concern regarding the potential immorality or unethical nature of such a judgment. Who will bear the responsibility? Who will take the obligation in the event of an error or failure: the AI system itself, the developer responsible for creating the AI, or the official who made decisions based on the data provided by the AI? Penalising the AI system presents challenges due to its inherent inability to undergo suffering or assume culpability. In what manner can the developer or the official be held accountable? Governments will inevitably confront these inquiries. Imbuing robots with programming ethics is a multifaceted endeavour that necessitates a cautious approach by society.

According to a scholarly article published in the journal Science and Engineering Ethics[30], it has been observed that artificial agents currently lack the capability to supplant human judgment in intricate, unpredictable, or ambiguous ethical situations, as assessed from a technological perspective. Another issue that should be considered is that of bounded ethicality.

In a recent study by Hagendorf and Danks (2022), a research prototype named Delphi was utilised to provide prompts and simulate individuals' moral judgments.[31] It has been discovered that akin to human beings, robots such as Delphi have the potential to exhibit unethical conduct when presented with a framing that separates ethical principles from the action itself.[32] This implies that the moral detachment observed in human behaviour may also manifest in the ethical decision-making of machines.

## 4. ARTIFICIAL INTELLIGENCE DURING THE PANDEMIC:

Artificial intelligence was extensively employed in several aspects of the COVID-19 pandemic, encompassing diagnostic procedures, public health initiatives, health care decision-making processes, social control measures, therapeutic interventions, vaccine research efforts, surveillance activities, integration with big data analytics, operation of essential healthcare services, and the treatment of patients afflicted with COVID-19.[33]

AI demonstrated superior performance in COVID-19 diagnosis, prognostic evaluation, epidemic prediction, and drug discovery. During the COVID-19 pandemic, AI has the potential to improve the efficacy of existing medical and healthcare systems substantially.[34]

So, to address the substantial strain on medical resources resulting from the COVID-19 pandemic or during a pandemic, it is imperative to implement measures such as expedited diagnosis, precise forecasting, intensified surveillance, and efficacious interventions. These actions are crucial for containing the transmission of the pandemic.

## 4.1. SCOPE OF ARTIFICIAL INTELLIGENCE IN THE MEDICAL SECTOR:

Artificial Intelligence (AI) has significantly transformed the field of medicine and is widely recognised as a fundamental component of computer science. AI can efficiently process vast amounts of data, sometimes with minimal reliance on theoretical frameworks. AI-driven medical technologies facilitate a 4P framework in healthcare characterised by its predictive, preventative, personalised, and participatory nature. [35]

Smartphones have emerged as a means of bridging the gap and facilitating the dissemination of electronic personal health records. They enable patients to monitor essential functions using biosensors and strive for maximum medication compliance. Artificial intelligence methodologies have the potential to assist physicians in effectively extracting clinically significant information from vast quantities of data. This enables clinicians to make informed and appropriate decisions

[30] Andreia Martinho et al., *Perspectives about Artificial Moral Agents*, 1 AI ETHICS 477 (2021).
[31] Peter Singer & Yip Fai Tse, *AI Ethics: The Case for Including Animals*, 3 AI ETHICS 539 (2023).
[32] *Id.*
[33] Lian Wang et al., *Artificial Intelligence for COVID-19: A Systematic Review*, 8 FRONT. MED. 704256 (2021).
[34] *Id.*
[35] A distributed framework for health information exchange using smartphone technologies - PubMed, https://pubmed.ncbi.nlm.nih.gov/28433825/.

with greater ease. Furthermore, artificial intelligence has the potential to aid researchers in efficiently analysing vast amounts of clinical data, therefore contributing to the overall success of healthcare facilities.

Artificial Intelligence aids physicians with current knowledge of clinical practice sourced from journals, websites, and e-books. Artificial Intelligence Systems have the potential to effectively reduce diagnostic and treatment mistakes, which are inherently challenging to eliminate. With the advancement of technology, Artificial Intelligence can extract crucial information from vast amounts of population data in real time. This enables AI to provide early health risk alerts and anticipate therapy outcomes. AI-assisted pathology tools have been created to aid in detecting several illnesses, including breast cancer, hepatitis B, gastric cancer, and colorectal cancer. Artificial intelligence (AI) has also been employed to forecast genetic alterations and predict the prognosis of illness outcomes.[36]

### 4.1.1. FAILURE OF AI IN THE HEALTH SECTOR:

When the risks are kind of health or life-threatening, we cannot take it lightly. We need to anticipate every glitch and work meticulously to preclude any chance. The potential for failure in AI-driven medical devices arises when one or more of its capabilities do not operate as initially anticipated. An instance when an artificial intelligence (AI) misinterprets a picture can lead to misdiagnosing a benign tumour as a malignant tumour or vice versa. In the context of a surgical robot, using AI may lead to erroneous surgical guiding due to the misidentification of objects. This phenomenon could result in surgical errors and bodily harm to patients. Misdiagnosis of patients can occur due to errors in speech recognition systems, which can be attributed to variances in speaker accents or dialects. The potential consequences of misdiagnosis in the context of AI include the AI system providing erroneous prescription recommendations to patients and erroneously anticipating adverse drug occurrences.

Software degradation, sometimes known as software rot, is a frequently disregarded yet significant aspect that warrants careful consideration. The phenomenon is the gradual decline in software quality over time, resulting in defects, unresponsiveness, unreliability, or a complete lack of usability. Consider the scenario when a smartphone gradually decreases performance and begins to exhibit functional issues. This phenomenon is believed to be influenced by several variables, including modifications in the software's operating environment, deterioration of compatibility among different software components, and the emergence of problems in code that is either unused or hardly utilised. The phenomenon of software rot has the potential to contribute to many AI failures, as outlined in the descriptions above.

Unresolved programming anomalies can potentially be a substantial hazard. Contemporary artificial intelligence systems operate on algorithms comprising an extensive assemblage of billions of lines of code. Specific interactions inside the code may lead to unforeseen and perplexing outcomes. An illustrative instance of such anomalies may be observed in contemporary video games, when pre-programmed artificial intelligence (AI) procedures occasionally exhibit peculiar deviations, resulting in characters behaving erratically. The AI above flaws can also manifest in AI processes embedded in medical equipment.

## 4.2. DURING COVID

Initially, the situation appeared to be favourable. In early detection, machines have surpassed human capabilities in promptly raising alerts on a novel and enigmatic virus from Wuhan, China. The HealthMap system, developed by Boston Children's Hospital and the Canadian health news scraper BlueDot, [37]detected early indications of illnesses by collecting data from internet news and social media platforms. BlueDot's algorithm successfully forecasted the cities that were most vulnerable to the spread of infection due to the movement of infected individuals[38], a considerable amount of time before the World Health Organization (WHO) and many weeks ahead of the global community's awareness.

In 2020, when the global population was subjected to government lockdown measures, it became evident that artificial intelligence (AI) would play a significant role in expeditiously predicting many aspects of an emerging and

[36] Bo Zhang, Huiping Shi & Hongtao Wang, *Machine Learning and AI in Cancer Prognosis, Prediction, and Treatment Selection: A Critical Approach*, 16 J. MULTIDISCIP. HEALTHC. 1779 (2023).

[37] Bhaskar Chakravorti, *Why AI Failed to Live Up to Its Potential During the Pandemic*, HARVARD BUSINESS REVIEW, Mar. 2022, https://hbr.org/2022/03/why-ai-failed-to-live-up-to-its-potential-during-the-pandemic .

[38] *Id.*

unfamiliar sickness. This encompassed the areas of diagnosis, prognosis, and forecasting the transmission patterns of the disease, which lacked a convenient and prompt testing method.

A multitude of artificial intelligence-enabled teams were deployed to capitalise on the opportunity. At Mount Sinai Hospital in New York, a team of researchers developed an artificial intelligence (AI) system to expedite the diagnosis of Covid-19.[39] This system utilises algorithms trained on lung CT scan data obtained from China[40]. A separate research team at the Massachusetts Institute of Technology (MIT) developed a diagnostic tool using algorithms trained on coughing noises[41]. A collaborative effort between New York University (NYU) and a Chinese institution resulted in the use of artificial intelligence (AI) technologies to forecast the likelihood of severe respiratory illness development in COVID-19 patients. For an extended period, we had been informed about the profound potential of artificial intelligence (AI), and unexpectedly, an occasion arose to see its practical implementation.

The predictive ability of diagnostic and prognostic methods for COVID-19 was unsatisfactory in real-world clinical settings, as indicated by a systematic review published in the BMJ.[42] A recent investigation at the University of Cambridge examined the efficacy of more than 400 deep-learning models utilised to diagnose COVID-19 by analysing chest X-rays and CT scans. The findings of this study revealed that these models were deemed completely impractical and ineffective for diagnostic purposes. [43]

## 5. REGULATIONS AND LEGAL LIABILITIES OF ARTIFICIAL INTELLIGENCE

### 5.1. LEGAL LIABILITIES

The determination of legal responsibility, both in civil and criminal contexts, for the harm or losses caused by the actions of an artificial intelligence (AI) is of utmost importance, given its varying degrees of autonomy. Any legal body with legal personality status can assume specific rights and responsibilities. Hence, the inquiry into the potential bestowal of legal personhood upon artificial intelligence (AI) is a sophisticated approach to address our present liability predicament. Nonetheless, it is imperative to evaluate the advantages and disadvantages of this proposition thoroughly.

The advancement of Artificial Intelligence (AI) has raised several issues about protecting personal data privacy. Artificial intelligence (AI) systems frequently depend on substantial personal data to acquire knowledge and generate predictions[44]. This practice has given rise to apprehensions over the gathering, manipulating, and retaining of this data. Anticipating the forthcoming discourse, the following are the discernments provided by the technology specialists. The prevalence of artificial intelligence (AI) technology is on the rise, as seen by the growing presence of virtual assistants such as Siri and Alexa, as well as the development of autonomous systems.[45]

One issue commonly anticipated by legal systems pertains to the use of AI-driven models by several organisations, which operate under the premise that prioritising accuracy necessitates compromising interpretability. The black-box models under consideration are generated by an algorithmic process using data only. Consequently, the code developers themselves must be able to decipher how the variables are amalgamated to produce the projected outcome. The cognitive functions of the human mind and the neural networks of artificial intelligence (AI) operate differently. Consequently, even with a comprehensive enumeration of all variables, it remains impossible to deconstruct an algorithm's intricate operations fully. In criminal proceedings, it is necessary to establish the presence of both actus reus and mens rea. Access to AI's core data processing mechanisms is needed to determine its cognitive aspect to be attainable.

[39] Nishita Mehta & Sharvari Shukla, *Pandemic Analytics: How Countries Are Leveraging Big Data Analytics and Artificial Intelligence to Fight COVID-19?*, 3 SN COMPUT. SCI. 54 (2021).
[40] *Id.*
[41] MIT's new algorithm can tell if you have COVID-19 by your cough | ZDNET, https://www.zdnet.com/article/mits-new-algorithm-tells-you-if-you-have-covid-19-by-your-cough/ .
[42] Chakravorti, *supra* note 36.
[43] *Id.*
[44] AI and Privacy: The privacy concerns surrounding AI, its potential impact on personal data, THE ECONOMIC TIMES, Apr. 25, 2023, https://economictimes.indiatimes.com/news/how-to/ai-and-privacy-the-privacy-concerns-surrounding-ai-its-potential-impact-on-personal-data/articleshow/99738234.cms?from=mdr.
[45] *Id.*

## 5.2. REGULATION OF ARTIFICIAL INTELLIGENCE:

Chuck Schumer, the prominent political figure who has prioritised artificial intelligence throughout his leadership, expressed his belief that regulating AI will be one of the toughest challenges[46]. The accelerated development of generative AI tools has attracted the attention of global regulators. Political entities and policymakers are speeding up their attempts to enact laws regulating the potential dangers of AI and holding developers liable for the conduct of their systems.

Reuters reports that a group of EU lawmakers working on AI legislation has called for a global summit to discover methods for regulating the development of advanced AI systems.[47] Twelve European Parliament members have urged European Commission President Ursula von der Leyen and United States Vice President Joe Biden to convene a summit of world leaders.[48]

The World Economic Forum Centre, during the 4th Industrial Revolution, convened industry, academic, and government leaders for a three-day conference in San Francisco to discuss generative AI systems' technical, ethical, and societal implications of productive AI systems.[49]

Several companies have secured multimillion-dollar agreements and significant valuations from venture capitalists, demonstrating their enthusiasm for generative AI startups. Concerns exist, however, about a possible peak within the fertile AI sector. [50]The first regulation to regulate artificial intelligence is the EU Act[51]. As per Stanford University's 2023 AI Index, 37 AI-related laws were passed worldwide in 2022.[52] China has emerged as a leading force in generative artificial intelligence models by introducing the world's first and most vital regulations about this technology.[53] While some nations continue to grapple with this issue, others are instituting national regulations to monitor and control the development and use of artificial intelligence technology. Rishi Sunak declared in the United Kingdom that the country would hold an international AI safety conference in the autumn. [54]However, the EU's AI Act, which has been developing for two years, was the first genuine attempt at controlling the technology. The White House unveiled the Blueprint for an AI Bill of Rights in October 2022.[55] This document presents a set of recommended principles to guide the development and utilisation of AI technology to safeguard the American populace from adverse consequences. The record does not include any explicit implications for firms that fail to comply with the prescribed criteria. However, it provides suggestions on how to guarantee that the technology is developed, focusing on safeguarding civil rights.

Despite its prominent position in the global technology sector, India has no legislative framework for artificial intelligence (AI). In 2018, the Ministry of Commerce and Industry established a task group focused on Artificial Intelligence (AI) to formulate a regulatory framework and identify pertinent applications for AI technology. [56]The study, given by the task group in 2019, delineated the necessity for a comprehensive national policy about artificial intelligence (AI) and put forth a recommendation for the formation of an AI research institute.

## 6. CONCLUSION

Due to no alternative available during COVID-19 to keep the system functioning due to social distancing, the digitalisation mode was the only available option. This enhanced the pace of digitalisation to the manifold, which was

[46] AP, *Tech Industry Leaders Endorse Regulating Artificial Intelligence at Rare Summit*, THE HINDU, Sep. 14, 2023, https://www.thehindu.com/sci-tech/technology/tech-leaders-back-ai-regulation-at-summit-in-washington/article67305893.ece.

[47] Global push to regulate AI, plus other AI stories this month, WORLD ECONOMIC FORUM (2023), https://www.weforum.org/agenda/2023/05/top-story-plus-other-ai-stories-to-read-this-month/ .

[48] *Id.*

[49] *Id.*

[50] Poulomi Chatterjee, *Are VCs Seeing a Generative AI Bubble?*, THE HINDU, Aug. 5, 2023, https://www.thehindu.com/sci-tech/technology/are-vcs-seeing-generative-ai-bubble/article67158059.ece (last visited Sep 14, 2023).

[51] EU AI Act: first regulation on artificial intelligence | News | European Parliament, (2023), https://www.europarl.europa.eu/news/en/headlines/society/20230601STO93804/eu-ai-act-first-regulation-on-artificial-intelligence.

[52] Theara Coleman published, *How Countries around the World Are Trying to Regulate Artificial Intelligence*, THEWEEK (2023), https://theweek.com/artificial-intelligence/1024605/ai-regulations-around-the-world.

[53] *Id.*

[54] *Id.*

[55] *Id.*

[56] Amar Patnaik, *AI Needs Responsible Regulation*, BUSINESSLINE (2023), https://www.thehindubusinessline.com/opinion/ai-needs-responsible-regulation/article67143172.ece.

already in speed post-launch of Jio in India. Parallel to the digitalisation, the intelligentization was also going on. Artificial intelligence is used to reduce human resources, achieve more efficiency, unbiased approach and quick results.

Even during the Covid, without past experiences or reports, artificial intelligence was used for medical treatment, grievance redressal, research, decision making, etc. In the paper, it has been pondered that in a situation like a pandemic, human resources are compelled to be restrained; then, can artificial intelligence take the place of human beings for day-to-day functioning? The issues of ethics, morality, legal liabilities, personification, regulations, etc., due to the conduct of any intelligent being or machine are the most emerging issues in contemporary timing. Saudi Arabia granted citizenship to a robot named Sofia, which later planned to visit for 65 countries tour. Despite several global conferences, seminars, submissions, etc., no practical, adequate or robust laws exist to regulate the conduct of intelligent beings like artificial intelligence and robots. The problem of pronouns, ethics, morality liabilities, emotions, identity, gender, the principle-agent relationship between machines and human beings, etc., needs attention to safeguard further rights, privacy, safety, etc., of human beings. These all are the most significant futuristic challenges of our society.

## CONFLICT OF INTERESTS

None.

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