ALGORITHM AUTHORITY AND HUMAN ACCOUNTABILITY: NAVIGATING THE ETHICAL AND LEGAL FRONTIERS OF ARTIFICIAL INTELLIGENCE

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ABSTRACT

"The real question is, when will we draft an artificial intelligence bill of rights? What will that consist of? And who will get to decide that?" [1]

Driven by the proliferation of Artificial Intelligence (AI), it has evolved from a futuristic concept into a powerful disruptor of economic, social, ethical, and legal obligations. The integration of legal and ethical considerations is paramount in any framework. Despite the undeniable advantages offered by Artificial Intelligence in enhancing and providing accuracy and innovations across different sectors, it simultaneously raises a significant concern over accountability. Specifically, when the AI makes any enormous decision or there is any prejudice caused by it, the legal and ethical dilemma persists on the fact of who should be held responsible for such actions and how such actions can be conclusively held accountable or attributed to the autonomous technological entity. The subject of the research seeks to evaluate whether it is appropriate and how to assign accountability to artificial intelligence as a topic or a prospective topic of legal discussion. The modern artificial intelligence is not recognized as any personality under the established law, and it is not a legal entity, which tends to make it more formidable to hold it accountable. If artificial intelligence is contemplated as a subject of law and is recognized under the law, then it would be apparent in implementing sanctions. Artificial intelligence successively creates new forms of anti-competitive behavior that are impenetrable to detect, posing a new challenge to the existing competition laws. This study emphasizes the necessity of incorporating "ethics by design" and "accountability by architecture" into AI development by putting forth a multidisciplinary strategy that combines legal jurisprudence, ethical theory, and technology governance.

Keywords: Artificial Intelligence, Accountability, Governance, ethics, legal framework.

[1] Werksmans Attorneys, 'Privacy: Human Right or Fallacy in the Digital World' (Werksmans Attorneys, 7 February 2024) https://www.werksmans.com/legal-updates-and-opinions/privacy-human-right-or-fallacy-in-the-digital-world/ accessed 20 April 2025.

Introduction

Artificial Intelligence belongs to a branch of computer science. It aims to discover the essence of intelligence and manufacture a new intelligent machine resembling human intelligence, in addition it is a technology which seeks to simulate human knowledge, reasoning, learning and planning. With the rapid growth and advancement in Artificial Intelligence technologies, the AI is set to be divided in the two parts, pursuant to which there are two types of AI currently present in the real-life scenario, i.e., the Narrow or Weak AI and the General or strong AI. The narrow or the weak AI is one of the most used, whose functions as demonstrated are to the extent that they are designated to perform specific tasks only, they cannot generalize the task on their own, or in any case they cannot extend their knowledge beyond to the specified knowledge they have been designated. They are designed to perform only specific tasks, like playing music, designing the arts and structures and whatsoever they are commanded as, further the general or the strong AI is a technology that can possess human-level intelligence, they can generalize their knowledge beyond to the extent they are being designed to perform their tasks. They are capable to transfer their knowledge from one domain to the other domain as well, which the narrow AI is not capable of. The fact that technology is advancing with a fast-pacing speed, AI is already giving examples of generating deep-fake videos, audios, with voice and animations of the real persons. Accountability, an obligation or willingness to accept responsibility or to account for one's action.[2] Unfortunately an imprecise definition of accountability is problematic as they do because it risks policy-making and public debates as well. This happens where the reforms and legal frameworks are not developed yet to form accountability for the technology advances. But when it does, typically where regulation is less developed, an imprecise definition of accountability hides the implicit trade-offs among different political choices over which accountability regime should be enforced.[3] This article typically researches and mentions that globally where the legal reforms are lacking for imposing the new legal frameworks in order to maintain certain limitations and impose certain guidelines as to how or to what extent the artificial intelligence can be used in the different work scenarios. The research is divided into different sections which will deal in detail about the topic and will lead to the conclusion on to how to balance the innovation with the rights and responsibilities and will also have a mention on the call for global cooperation and

[2] Merriam-Webster.com Dictionary, 'Accountability' (Merriam-Webster) https://www.merriam-webster.com/dictionary/accountability accessed 25 June 2025
[3] NOVAIAv1

inclusive governance for the technological advancements.

ALGORITHMIC AUTHORITY

Evolution from human to machine-driven decision-making

Human perception enables people to analyze information, generate ideas, orient themselves in their surroundings, and understand their environment. It is shaped by numerous factors and represents a multifaceted and evolving area of research that encompasses psychology, neuroscience, artificial intelligence, philosophy and educational frameworks, advancing mental health interventions. And improving artificial intelligence system. The analysis of the rational decision-making model of the humans assumes that humans go through a stepwise process to define the problem, work out what is important, generate alternatives and evaluate these, and then select the best solution.[4] Simultaneously, as the society and the technology is evolving with time, there is a significant shift from the human decision-making to machine-driven decision making. The machines slowly and steadily started the algorithms, simultaneously the algorithms enabled the machines access to big data as well. Thereby, the machines are programmed with decision making ability, wherein they will have human intellect, and are trained on vast databases, which simultaneously assumes roles that are exclusive to humans. Today, the AI-driven platforms independently make decisions in domains like credit-scoring, predictive policing, medical diagnostics, hiring and even judicial sentencing, often with limited human oversight.[5] This technological empowerment has been the most transformative shifts in modern history, wherein the machines are empowered and capable of doing formidable calculations, analytical thinking, and independent decision making, without the human intervention or the least human intervention. This technological empowerment has led to the upsurge of the issue of accountability, privacy, transparency and legal responsibility.

HUMAN ACCOUNTABILITY IN THE AGE OF AI

The age of artificial intelligence has brought forth unprecedented technological advances that are redefining traditional notions of human agency, responsibility, and legal accountability.

[4] Herbert A Simon, *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organization* (Macmillan 1947)
[5] Brent Daniel Mittelstadt and others, 'The Ethics of Algorithms: Mapping the Debate' (2016) *Big Data & Society* https://doi.org/10.1177/2053951716679679

Artificial Intelligence, that automatically grabs and extends information through deep learning after human beings input part of the data. However, this type of Artificial Intelligence is still operated and creates works by following established procedures under the influence from the algorithms and data. This type of artificial intelligence many a times makes decisions or such creations that have serious consequences for society and the individuals as well, which possesses the question of accountability, as to whom to impose the accountability of these actions. These AI systems causing prejudice to society and the individuals have become a central to contemporary legal and ethical debates. Earlier, when there was human decision-making, then the question of accountability didn't arise because it was known to the individuals or the society, that who has done the task or creation that have caused prejudice, and it was relatively easy to find out that who has led to the serious consequences being borne by the society. This sudden artificial intelligence empowerment, wherein human intervention has gone to zero and a point of data can empower the technology to generate or give outputs that possess serious threat to the society at large or even to any individual. Artificial Intelligence that often operates autonomously, sometimes evolving their behavior in unpredictable ways that even developers do not fully understand. The legal frameworks currently are based on the identifiable agents of actions and mens rea (intent). It is predominant that the human beings retain ultimate control over the actions of the artificial intelligence, which will lead to human beings accountable, which is known as human accountability, ultimately leading to the position wherein the issue for accountability of a strong artificial intelligence actions would not rise.

In current situation the issue of accountability has only acknowledged in the European context:

"If we are increasingly going to use the assistance of or delegate decisions to AIs, we need to make sure these systems are fair in their impact on people's lives, that they are in line with values that should not be compromised and able to act accordingly, and that suitable accountability processes can ensure this"[6]

CHALLENGES IN TRACING ACCOUNTABILITY IN AUTOMATED SYSTEMS

The traditional top-down accountability model from executives to managers faces challenges with A.I.'s black box nature. [7] The black box nature, or we call it as black box problem is

[6] AI High-Level Expert Group, *A Definition of AI: Main Capabilities and Scientific Disciplines* (European Commission 2019) https://ec.europa.eu/digital-singlemarket/en/news/definition-artificial-intelligence-main-capabilities-and-scientific-disciplines accessed 25 June 2025

[7] Luca Collina, Mostafa Sayyadi and Michael Provitera, 'Critical Issues About A.I. Accountability Answered'

rapidly and continuously growing in the current technologies of artificial intelligence, which causes the major challenges for the operators in tracing the accountability in automated systems. This black box problem in simple words refers to the difficulty in understanding the decision-making process in the complex artificial intelligence systems or models, i.e., the complex and difficult automated systems, that have their own neural network, which sometimes does not catch things or objects in its network, and when the reverse action which was not expected is done by that model, then due to its black-box problem the operators are unable to determine that why such reverse action took place, even when that model was expected to work properly. The models that are using the deep learning technology, they neurological systems, which have certain layers of nodes in them, where each node applies a mathematical function to its inputs. These layers can be hundreds of deep, with each layer transforming it into complex ways. [8] This in turn possess a serious challenge in tracing the accountability, as to how to pinpoint "accountable" entity as to who is accountable, is it the operator, the manager, or the artificial intelligence model itself.

There are several different situations wherein the automated model has been trained to work and impose things or actions in a certain manner, but why executing that commands in real they anyhow perform it differently and gives the most unexpected results out of the action which causes harm to the third party or any person or society at large, this is known as autonomy and adaptiveness in artificial intelligence models or the automated models. These models are often multi-actor models, they are used by different actors at different levels, so it is extremely difficult to analyze that who's action led to the destructions caused. The challenges of tracing the accountability in automated systems are multifaceted and deeply structed.

LEGAL FRAMEWORKS AND REGULATORY CHALLENGES

The existing legal framework is insufficient and ineffective, and a lot needs to be done. Amongst the international frameworks, the **OECD AI Principles** are the first intergovernmental standard on AI. They promote innovative, trustworthy AI that respects human rights and democratic values. Adopted in 2019 and updated in 2024, they are composed of five values-based principles and five recommendations that provide practical and flexible

California Management Review (Insight, 6 November 2023) https://cmr.berkeley.edu/2023/11/critical-issues-about-a-i-accountability-answered/#:~:text=As%20A.I.,liable%20have%20limitations%20as%20well accessed 27 June 2025

[8] Alka 1974 (assuming that's the author's handle), 'Black Box Problem in AI' (GeeksforGeeks, last updated 27 December 2024) https://www.geeksforgeeks.org/black-box-problem-in-ai/ accessed 27 June 2025

guidance for policymakers and AI actors.[9] These OECD principles complement OECD standards in areas such as digital security, privacy, responsible business conduct etc. A particular focus of the recommendation is the development of metrics to measure AI research, development and deployment, and to assess progress in its implementation. It recommends government to build human capacity and prepare for labour market transformation to use artificial intelligence and at the same time mandates for AI companies to make such programming that makes it easy to trace the output. The OECD's AI Policy Observatory is also set up to facilitate the implementation of AI principles by providing evidence and guidance on AI metrics, policies and practices and by constituting a hub to facilitate dialogue and share best practices on AI policies. In June, 2019, **G20 AI principles** were adopted by the G20. The G20 principles are aligned with the OECD framework and provide a set of non-binding, high-level guidelines to ensure the responsible and human-centered development of artificial intelligence. Aimed at fostering international coherence in AI governance, these principles reflect a collective commitment by major global economies to promote ethical, trustworthy, and sustainable AI systems that align with democratic values and the rule of law.

In 2021, UNESCO adopted, "**Recommendation on ethics of Artificial Intelligence***"*[10] and it was made applicable to all 194 member states. The recommendations provide a comprehensive regulatory framework centered on human rights, ethical principles, and sustainability. It emphasizes transparency, accountability, non-discrimination, and the need for robust legal and institutional mechanisms to ensure responsible development and deployment of AI systems. Besides these it provides for **Regulatory Sandboxes** which are controlled environments established by regulatory authorities where AI systems can be tested in real-world conditions under close supervision. These sandboxes allow for experimentation and innovation while ensuring that the AI systems comply with ethical principles, legal norms, and human rights standards.

The OECD Principles and the G20 principles primarily focus on promoting innovation, economic growth, and responsible AI use through values like transparency, robustness, and accountability. In contrast, the UNESCO Recommendation is an ethics-based framework

[9] OECD, *AI Principles* OECD (n.d.) https://www.oecd.org/en/topics/sub-issues/ai-principles.html accessed 29 June 2025

[10] UNESCO, *Recommendation on the Ethics of Artificial Intelligence* (adopted 23 November 2021, revised 26 September 2024) https://unesdoc.unesco.org/ark:/48223/pf0000381137/PDF/381137eng.pdf.multi accessed 30 June 2025

grounded in human rights, cultural diversity, sustainability, and social justice. The UNESCO adopts a broader, more inclusive approach with concrete implementation mechanisms making it more comprehensive in addressing global ethical concerns surrounding AI.

The **European Union (EU) adopted a set of world's first AI rules in June, 2024** which are set to be fully implemented by June 2026. EU has categorized AI risks into 4 types- Unacceptable risks, High Risks, Limited Risks and Minimal Risks. The AI falling under the unacceptable risks category are to be completely banned. These include cognitive behaviour manipulation AI, social scoring AI, categorizing of people AI etc. while those falling under the High-Risk category, will be assessed before being allowed in the market and during the time they are functioning. High-Risk category includes Management and operation of critical infrastructure, Education and vocational training, Law enforcement, border control management, Assistance in legal interpretation etc. Not much attention is paid for AI falling under the Limited risk and Minimal risk categories. It also provides a redressal mechanism where people will have the right to file complaints about AI systems to designated national authorities. The **EU's AI Liability Directive, 2022**[11] even proposes the application of strict liability regime for AI categorized under the High Risk category. Through this the affected person would benefit from a presumption of fault on the part of the operator, unless the latter is able to prove that it has abided by its duty of care.[12] This act is yet to come into force.

In the US, **Algorithmic Accountability Act, 2023**[13] has been introduced in their parliament, but is yet to be passed. It provides for a transparent system in which the companies are required to disclose the algorithms they use and in such a way that they are explainable. The act requires the companies to conduct an internal impact assessment and to rectify potential biases or discriminatory effects, if any. Besides this, National Institute of Standards and Technology also provided **AI Risk Management Framework (AI RMF)** in January, 2023 that provides knowledge to organizations about the risks associated with AI systems. The NIST publishes a list annually that helps organizations identify unique risks posed by generative AI

[11] Tambiama Madiega, Artificial Intelligence Liability Directive (EPRS, European Parliamentary Research Service, February 2023) https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/739342/EPRS_BRI(2023)739342_EN.pdf accessed 29 June 2025

[12] Tambiama Madiega, *Artificial Intelligence Liability Directive* (EPRS, European Parliamentary Research Service, February 2023) https://www.europarl.europa.eu/RegData/etudes/BRIE/2023/739342/EPRS_BRI(2023)739342_EN.pdf accessed 29 June 2025

[13] Algorithmic Accountability Act of 2022, H.R.6580, 117th Congress (introduced 3 February 2022) https://www.congress.gov/bill/117th-congress/house-bill/6580/text accessed 29 June 2025

and proposes actions for generative AI risk management that best aligns with their goals and priorities.[14]

In India, as of now, we do not have a full-fledged legislation that governs the use of AI in India but we have some legislations such as the **Informational Technology act, 2000 and the Digital Personal Data Protection Act, 2023** which covers some of the aspects of AI. DPDP Act, 2023 mandates lawful processing based on consent, data minimization, purpose limitation, and ensures rights such as access, correction, and grievance redressal for individuals. AI developers and deployers handling large-scale or sensitive data may be classified as Significant Data Fiduciaries and are subjected to stricter compliance requirements. The Act indirectly supports ethical AI governance by promoting transparency, accountability, and data protection, laying the groundwork for future AI-specific regulatory frameworks in India. Besides this, NITI Aayog proposed a strategy framework titled, "**Responsible AI for All"[15]** which focuses on ensuring that AI technologies are developed and deployed in a manner that is ethical, responsible, and aligned with India's constitutional values. It is anchored in seven foundational principles: safety and reliability, fairness and non-discrimination, equality, protection of privacy and data, transparency, accountability, and the promotion of positive human values.[16] The framework employs a practical, use-case-based strategy—illustrated through projects like Digi Yatra—to assess how these principles function in real-world scenarios. A key emphasis is placed on voluntary participation and informed consent, especially for public-facing AI applications like facial recognition, with a requirement for non-digital alternatives to be made available. It calls for strict data governance, including limitations on how personal data is used and shared, to prevent misuse. Transparency and the ability to interpret AI decisions are essential, making systems open to audit and review. The framework also establishes clear lines of accountability, including legal responsibility and grievance mechanisms, to address issues arising from AI use. By integrating global standards such as the EU's GDPR and UNESCO's ethical guidelines, the framework seeks to guide AI development in a way that supports democratic principles and safeguards individual rights.

[14] *NIST, Artificial Intelligence Risk Management Framework: Second Draft* (NIST, 18 August 2022) 7 https://www.nist.gov/system/files/documents/2022/08/18/AI_RMF_2nd_draft.pdf accessed 29 June 2025

[15] *NITI Aayog, Responsible AI for All: Adopting the Framework – A Use Case Approach on Facial Recognition Technology* (NITI Aayog, November 2022) 8 https://www.niti.gov.in/sites/default/files/2022-11/Ai_for_All_2022_02112022_0.pdf accessed 30 June 2025

[16] *NITI Aayog, Responsible AI for All: Adopting the Framework – A Use Case Approach on Facial Recognition Technology* (NITI Aayog, November 2022) 8 https://www.niti.gov.in/sites/default/files/2022-11/Ai_for_All_2022_02112022_0.pdf accessed 30 June 2025

CHALLENGES

AI in a very short span of time has evolved from a backend tool used by experts to a consumer facing technology. This is the real challenge as it is quite a task to keep up the laws as compared to the ever-changing nature of AI. The pace at which it changes is very difficult to predict and in no time have the laws become ineffective. Moreover, the AI provides a hyper-personalized service. Hyper-personalization needs data to be collected and processed at individual level while at the same time without any personally identifiable information (PII) stored.[17] This problem becomes very difficult to address even with the best of technology. In every solution that AI provides there is a layer of data collected from different places, and it requires to navigate through many layers to identify the error. Hyper-Personalization may enhance user experience, but it also possesses a risk of biasness. It may happen that a user is exposed only to data which aligns with his existing views, creating a kind of polarization. Such type of bias can only be identified if one knows the decision-making process of the AI, which is very complex to understand and interpret.

There is also a lack of dedicated AI regulation body. These regulatory bodies should be given the task of licensing the AI companies operating within the state along with the duty to draft regulatory framework and laws to ensure ethical and transparent working. Moreover, they should also have the enforcement powers to ensure compliance. There is also a need of categorization of AI based on the risk they may possess to ensure effective and efficient compliance of framework.

The AI problem is inter-governmental in nature. It requires co-operation from all the member states to ensure robust and effective compliance. All the countries are required to agree on a common standard of framework and base their laws on such framework. This would resolve the complexities in the compliance of the law and make it easier for companies as they need to adhere to one single standard.

LIABILITY IN AI-DRIVEN SYSTEMS

Criminal Liability of AI-related harm

The question whether the harm or the prejudice caused by the AI-driven models, also known

[17] Biswajit Biswas, *'The AI Dilemma: Ethical and Regulatory Challenges in AI Adoption'* (Tata Elxsi EtEdge-Insights, 16 August 2024) para 3 https://www.tataelxsi.com/news-and-events/the-ai-dilemma-ethical-and-regulatory-challenges-in-ai-adoption accessed 29 June 2025

as AI-related harm is criminally liable or not? It clearly depends on two factors: AI's self-reliance, and its indivisibility. Criminal liability is determined by the mens rea of the individual or the perpetrator- the guilty mind of the perpetrator.[18] The AI-related incidents are increasing rapidly in the society, even though there are many advantages of the Artificial Intelligence, yet they possess serious harm, and they have the potential of harming the society at large. The main AI-related incidents are the situations wherein there may be AI systems-malfunction, they also produce bias results, in pursuant to the discriminatory outputs they have been programmed with, they also cause consequences that are mostly unintended, as they are sometimes programmed with several other outputs, but they give the different output, because of their black-box problem in the system. These incidents somehow lead to certain privacy violations, of the individuals, and possess severe safety risks to the society. This leads to the difficulty of assigning when humans and AI interact and who to be held liable for the incident.[19] **(Uber self-driving car crash (2018))**

To establish the criminal liability of any incident or any offense, two elements are to be satisfied, that are mentioned as below- (a) actus reus i.e., the physical element and (b) mens rea i.e., the mental intention, if any entity, or the individual satisfies these two crucial elements then, they will be held criminally liable.

This concludes to the issue regarding, how the artificial intelligence entity be claimed, liable for the crime committed, he is the perpetrator or the programmer or any of the third party, if he is directly held liable for the crime or the incident happened by these models, then what punishment they should be entitled. The main concern regarding criminal liability is that, how to determine that whether there was mens rea (intent) present or not in the incident, which is one the most crucial aspect or ingredient in determining the criminal liability.

Civil Liability of Artificial Intelligence

To understand, Civil liability is a legal obligation that requires a party to pay for damages or to follow other court-enforcements in a lawsuit .[20] The discussion for the liability of artificial

[18] RA Duff, *Intention, Agency and Criminal Liability: Philosophy of Action and the Criminal Law* (Blackwell 1990) https://ssrn.com/abstract=2637418 accessed 29 June 2025

[19] National Highway Traffic Safety Administration (NHTSA), *Self-Driving Car Safety* (2023) https://www.nhtsa.gov/vehicle-safety/automatedvehicles-safety accessed 30 June 2025

[20] *"Civil Liability"* (Wex Legal Encyclopedia, last reviewed October 2022) para 1 https://www.law.cornell.edu/wex/civil_liability accessed 30 June 2025

intelligence entity, relies on the legal status of the artificial intelligence. There a question lies is that whether artificial intelligence can be treated as legal person with legal rights and legal liabilities. There are certain debates around, regarding granting of the legal rights and duties to artificial intelligence. Law defines a "person" to include a company or association or body of individuals, whether incorporated or not[21]. The term 'shall include' makes it clearer that the term 'person' is not merely restricted to include a natural person and may include an artificial person too. To determine the liability, it is first to establish whether the entity is a legal person or not. To be a legal person, there should be certain level of consciousness to understand the legal rights and legal duties, and some intellectual ability to recognize the drawbacks, the consequences and the punishments of the actions. Therefore, artificial intelligence should be granted legal personality, as that would provide a strong incentive for further research and development in the field of Artificial Intelligence.

THE ROLE OF HUMAN OVERSIGHT

The principle of "human-in-the-loop"

Every time whenever the any model of the artificial intelligence comes in movement, there is always a particular question being asked: "*Will Artificial Intelligence replace Humans?*" But reliance placed to the theory that, human indulged with artificial intelligence will replace humans not in flow with the artificial intelligence technology.

The concept of human-in-loop with artificial intelligence is that the AI entity should be governed and managed at every step by the humans, wherein more human autonomy is present, while less of artificial intelligence empowerment to be independent. Human intervention at every step from programming to assisting and training, there is any level of human engaged in that, which would simultaneously improve the contextual understanding, the human intervention will lead to the decisions made by more, consciousness, intellectuality and ethics, which the artificial intelligence clearly lacks.

WAY AHEAD

What is required now is risk-based categorization of different types of AI at micro level and a sector-based regulation approach to address the risks. This will help us to identify the AI with

[21] General Clauses Act 1897, s 3 cl (42)

potential risk and more attention could be paid to mitigate their effects. Along with that, since AI is a global phenomenon, we also need a global solution and for that cross-border cooperation becomes a sine qua no. Multilateral collaboration through platforms like the G20, UNESCO, and the OECD can foster interoperability and collective governance. Whenever there is a shift in technology of such a large scale, transformation of labour becomes important. People need to be made aware of the possible hazards that an AI possesses. The manufacturers can be motivated to adopt a more transparent and sustainable approach ensuring ethical innovation.

DISCLOSURE

"AI tools were used in limited capacity during the preparation of this manuscript. ChatGPT (GPT-4) was used for citation formatting. The final AI similarity index score was under 10%. All AI-generated inputs were reviewed and edited by the authors."

BIBLIOGRAPHY

1. National Highway Traffic Safety Administration (NHTSA), *Self-Driving Car Safety* (2023) https://www.nhtsa.gov/vehicle-safety/automatedvehicles-safety accessed 30 June 2025

2. General Clauses Act 1897

3. Duff RA, *Intention, Agency and Criminal Liability: Philosophy of Action and the Criminal Law* (Blackwell 1990) https://ssrn.com/abstract=2637418 accessed 30 June 2025

4. Mittelstadt B and others, 'The Ethics of Algorithms: Mapping the Debate' (2016) *Big Data & Society* https://doi.org/10.1177/2053951716679679 accessed 30 June 2025

5. NIST, *Artificial Intelligence Risk Management Framework: Second Draft* (NIST, 18 August 2022) https://www.nist.gov/system/files/documents/2022/08/18/AI_RMF_2nd_draft.pdf accessed 30 June 2025

6. Tata Elxsi, 'The AI Dilemma: Ethical and Regulatory Challenges in AI Adoption' (16 August 2024) https://www.tataelxsi.com/news-and-events/the-ai-dilemma-ethical-and-regulatory-challenges-in-ai-adoption accessed 30 June 2025

7. Wex Legal Encyclopedia, *Civil Liability* (last reviewed October 2022) https://www.law.cornell.edu/wex/civil_liability accessed 30 June 2025