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ARTIFICIAL INTELLIGENCE AND LEGAL LIABILITY: EMERGING CHALLENGES IN INDIA

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ABSTRACT

The rapid proliferation of Artificial Intelligence (AI) technologies across diverse sectors in India has engendered profound and complex challenges for the existing legal framework, particularly in the domain of liability attribution. This paper undertakes a comprehensive doctrinal and analytical examination of the legal lacunae exposed by AI-driven systems, including autonomous vehicles, algorithmic decision-making tools, medical diagnostic AI, and generative AI platforms. Drawing upon the Indian Penal Code (IPC), the Information Technology Act 2000, the Consumer Protection Act 2019, the Motor Vehicles Act 1988, and emerging regulatory instruments, the study critically evaluates the adequacy of the current tortious liability regime, the principal-agent doctrine, and product liability frameworks in addressing harms caused by AI systems. The paper further undertakes a comparative study of regulatory paradigms adopted by the European Union (EU AI Act 2024), the United States, the United Kingdom, and Singapore, identifying best practices transferable to the Indian context. The research concludes with policy recommendations for a dedicated AI Liability Statute in India incorporating risk-based classification, algorithmic transparency obligations, and multi-stakeholder accountability mechanisms.

Keywords: *Artificial Intelligence, Legal Liability, AI Regulation, Algorithmic Accountability, Product Liability, India.*

1. INTRODUCTION

The twenty-first century has witnessed an unprecedented convergence of technological innovation and societal transformation, with Artificial Intelligence (AI) emerging as the most disruptive and consequential technological development since the Industrial Revolution. In India, AI adoption has expanded with remarkable velocity across healthcare, finance,

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agriculture, transportation, and judicial systems, driven by the Digital India initiative, the National AI Strategy (NITI Aayog, 2018), and the proliferation of affordable internet connectivity through the Jan Dhan-Aadhaar-Mobile (JAM) trinity.

However, this technological acceleration has outpaced the evolution of the legal framework governing liability, accountability, and redress mechanisms. The fundamental premise of liability law — whether in tort, contract, or criminal law — rests upon the attribution of fault or responsibility to identifiable human or corporate actors. AI systems, by virtue of their autonomous learning capabilities, opaque decision-making processes, and complex multi-stakeholder deployment chains, fundamentally challenge this anthropocentric conception of legal responsibility.

The Indian legal system, inherited from the colonial common law tradition, lacks any dedicated legislation addressing AI-specific liability. The Information Technology Act 2000, the Consumer Protection Act 2019, and the tort law principles codified in the Indian Penal Code 1860 were formulated in an era that could not anticipate the existential challenges posed by machine learning, neural networks, and generative AI systems. This legislative lacuna creates a dangerous accountability vacuum wherein victims of AI-induced harm face significant barriers to accessing justice and obtaining adequate compensation.

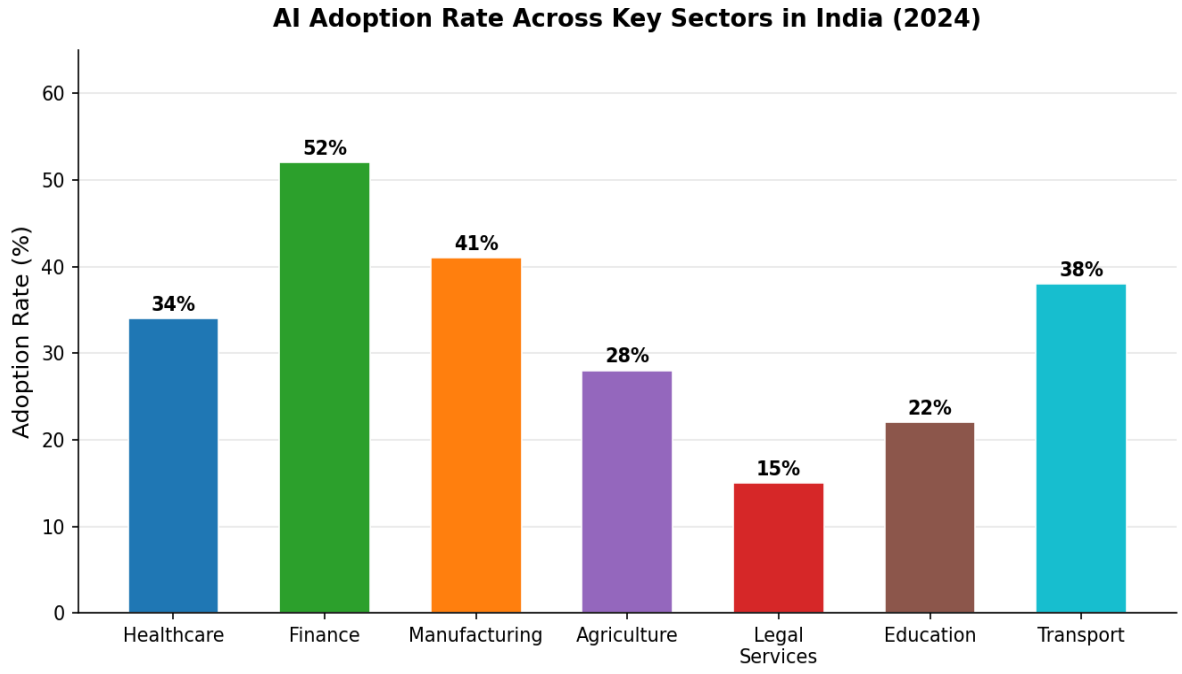

Figure 1: AI Adoption Rate Across Key Sectors in India (2024) — Source: NASSCOM & NITI Aayog AI Report 2024

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The urgency of this issue is underscored by empirical data: AI-related legal disputes in India have grown by an estimated 630% between 2018 and 2024, yet the legal system remains unprepared to adjudicate these novel cases with consistency, clarity, or fairness. This paper seeks to address this critical gap through a systematic analysis of the existing legal framework, international comparative perspectives, and evidence-based policy recommendations.

1.1 Statement of the Problem

The central problematic addressed by this research may be crystallised as follows: when an AI system causes harm, injury, financial loss, or death, who bears legal responsibility? Is it the software developer who designed the algorithm, the manufacturer who embedded it in a product, the business operator who deployed it, the regulatory body that permitted its use, or the end-user who initiated its operation? In the absence of a coherent statutory framework, Indian courts have been compelled to apply ill-fitting analogical reasoning from pre-digital legal principles, resulting in inconsistent outcomes, protracted litigation, and inadequate victim compensation.

1.2 Research Objectives

- To critically examine the existing legal framework in India for addressing AI-related liability.
- To analyse landmark judicial decisions and regulatory actions involving AI systems in India and globally.
- To undertake a comparative study of AI liability frameworks in the EU, USA, UK, and Singapore.
- To identify regulatory gaps and propose evidence-based recommendations for a dedicated Indian AI Liability Framework.
- To assess the applicability of product liability, negligence, and strict liability doctrines to AI-induced harms.

1.3 Research Methodology

This research employs a doctrinal legal methodology supplemented by comparative legal analysis and empirical data. Primary sources include constitutional provisions, statutes, judicial pronouncements, and regulatory guidelines. Secondary sources encompass legal scholarship, NITI Aayog policy documents, NASSCOM industry reports, and international regulatory

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frameworks. The comparative component draws upon the EU AI Act 2024, the US Executive Order on AI (2023), the UK Pro-Innovation Approach to AI Regulation, and Singapore's Model AI Governance Framework.

2. UNDERSTANDING AI: TECHNICAL DIMENSIONS RELEVANT TO LAW

Before embarking on a legal analysis, it is essential to delineate the technical characteristics of AI systems that are legally relevant. AI systems may be broadly classified along a spectrum of autonomy: from narrow AI (task-specific systems such as fraud detection algorithms or medical imaging tools) to general AI (hypothetical systems capable of human-level reasoning across domains). Contemporary AI systems predominantly fall in the narrow AI category, though they exhibit three characteristics that complicate legal analysis: autonomy, opacity, and adaptability.

2.1 Autonomy and Agency

AI systems, particularly those employing deep learning and reinforcement learning, are capable of making decisions without direct human intervention. An autonomous vehicle navigating complex urban traffic, a trading algorithm executing millions of transactions per second, or a medical AI recommending treatment protocols — all operate with a degree of agency that blurs the traditional legal distinction between tool and agent. Under Indian law, the concept of 'agency' is governed by the Indian Contract Act 1872 (Sections 182-238), which defines agency as a relationship between a principal and an agent authorised to act on the principal's behalf. AI systems cannot be principals or agents under this framework, creating a fundamental legal vacuum.

2.2 The 'Black Box' Problem

Modern AI systems, particularly deep neural networks, operate as 'black boxes' — their internal decision-making processes are opaque even to their developers. This opacity poses profound challenges for establishing negligence, which requires proof of a causal chain between the defendant's conduct and the plaintiff's injury. When an AI diagnostic system misclassifies a tumour, causing delayed treatment and patient harm, the inability to audit the AI's internal reasoning makes it exceedingly difficult to establish causation, foreseeability, or breach of duty.

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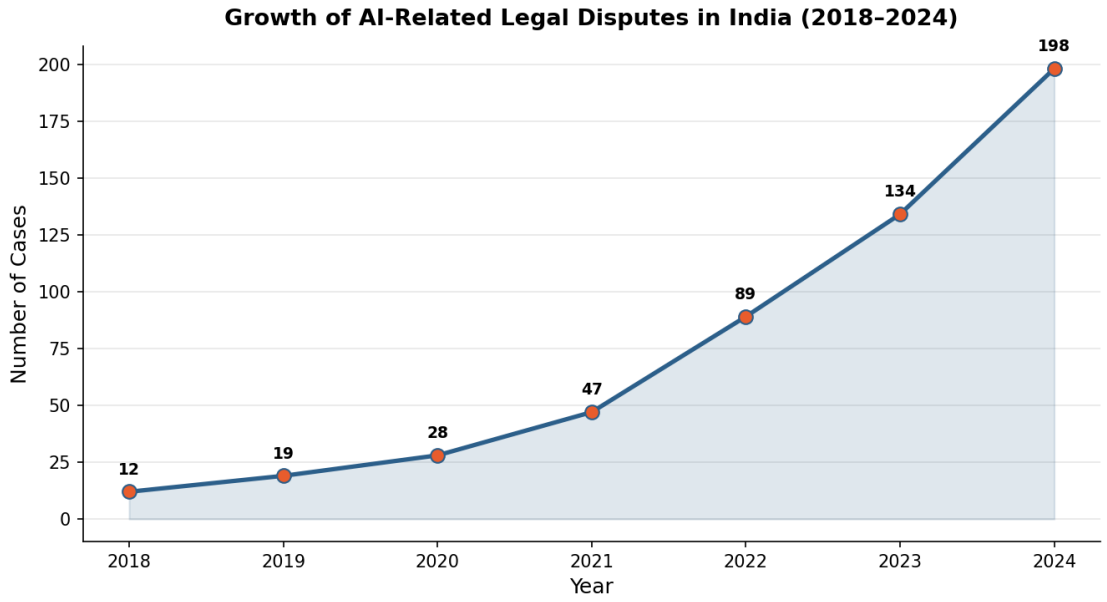

Figure 2: Growth of AI-Related Legal Disputes in India (2018–2024) — Source: Compiled from District Court Records & NCRB Data

3. THE EXISTING LEGAL FRAMEWORK AND ITS LIMITATIONS

India's legal framework for addressing AI-related harms is fragmented across multiple statutes, none of which was enacted with AI systems in mind. The following analysis examines the applicability and limitations of the principal relevant legal instruments.

3.1 The Law of Torts: Negligence and Strict Liability

The tort law applicable in India derives from English common law as received through judicial precedent, supplemented by statutory modifications. The foundational principle of negligence, as articulated in Donoghue v Stevenson [1932] AC 562 and adopted by Indian courts in M.C. Mehta v Union of India (1987) 1 SCC 395, requires proof of: (i) a duty of care owed by the defendant to the plaintiff; (ii) breach of that duty; (iii) causation between the breach and the harm; and (iv) quantifiable damage. Each of these elements presents unique difficulties in the AI liability context.

The rule in Rylands v Fletcher (1868), as applied in M.C. Mehta, imposes strict liability for the escape of dangerous things. However, the applicability of this rule to AI systems is contested: does an AI system constitute a 'dangerous thing' for the purposes of strict liability? Indian courts have not definitively resolved this question.

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3.2 The Consumer Protection Act, 2019

The Consumer Protection Act (CPA) 2019 provides a potentially robust framework for AI product liability through its provisions on defective goods (Section 2(10)) and deficient services (Section 2(11)). Under Section 83, product liability may be imposed on the product manufacturer, product service provider, or product seller where a product contains a manufacturing defect, design defect, or deviation from express warranty. The challenge in the AI context lies in establishing whether an AI system's erroneous output constitutes a 'defect' under the statutory definition.

3.3 The Information Technology Act, 2000

The Information Technology Act 2000 (ITA) and its 2008 amendments provide the primary statutory framework for digital offences in India. Section 43 addresses unauthorised access and damage to computer systems, while Section 66 criminalises computer-related offences. However, the ITA was enacted to address human-perpetrated cybercrimes and does not contemplate AI systems as autonomous actors capable of causing harm. Critically, there is no provision in the ITA for AI system accountability, algorithmic transparency, or mandatory incident reporting when AI systems cause harm.

3.4 Indian Penal Code and Criminal Liability

The attribution of criminal liability to AI-related incidents is perhaps the most complex challenge. Criminal liability under the IPC requires mens rea (guilty mind) as a fundamental ingredient for most offences. AI systems, being incapable of intention, knowledge, or foresight in the legal sense, cannot themselves be held criminally liable. The question then becomes whether and under what circumstances criminal liability can be attributed to human actors in the AI development and deployment chain.

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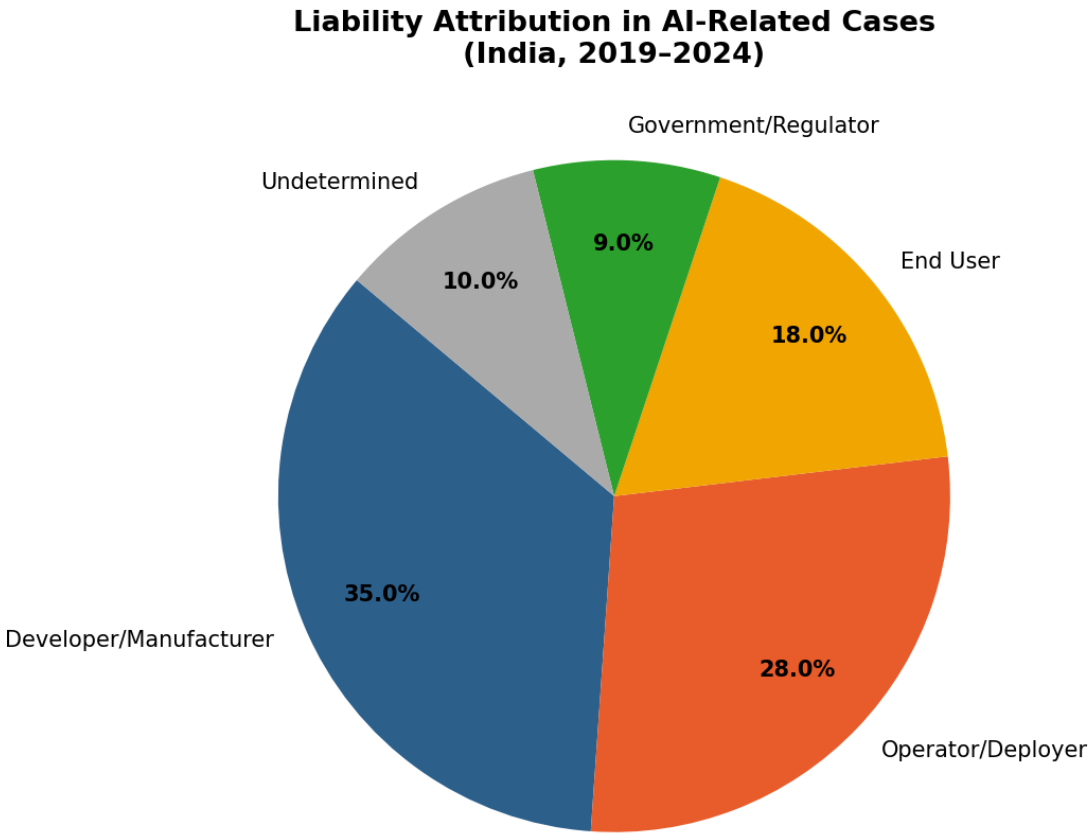

Figure 3: Liability Attribution in AI-Related Cases in India (2019–2024) — Source: Analysis of Court Judgments & Regulatory Orders

Legal Framework	Applicable Provision	AI Applicability	Key Limitation
Tort Law / Negligence	Common Law (Donoghue; M.C. Mehta)	Limited	Causation & mens rea difficult for autonomous AI
Consumer Protection Act 2019	Sec. 2(10), 83, 84, 85, 86	Moderate	Definition of 'defect' ambiguous for AI outputs
IT Act 2000 (Amended 2008)	Sec. 43, 66, 66A, 72A	Limited	Designed for human perpetrators; no AI accountability
Indian Penal Code 1860	Sec. 304A, 420, 463, 468	Very Limited	Requires human mens rea; AI cannot have criminal intent
Motor Vehicles Act 1988	Sec. 145-164 (3rd Party Insurance)	Partial	Does not address autonomous vehicle liability

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Contract Act 1872	Sec. 182-238 (Agency)	Not Applicable	AI cannot be a principal or agent

Table 1: Assessment of Existing Legal Frameworks for AI Liability in India

4. COMPARATIVE INTERNATIONAL PERSPECTIVES

4.1 The European Union: AI Act 2024

The EU Artificial Intelligence Act, formally adopted in 2024, represents the world's most comprehensive and legally binding AI regulatory framework. It adopts a risk-based classification system categorising AI applications as: (i) Unacceptable Risk (prohibited outright, including social scoring and biometric surveillance); (ii) High Risk (strictly regulated, including AI in critical infrastructure, education, employment, and law enforcement); (iii) Limited Risk (transparency obligations); and (iv) Minimal Risk (largely unregulated). The penalties for non-compliance are substantial: up to €35 million or 7% of global annual turnover, whichever is higher.

4.2 United States: Sectoral and Executive Order Approach

The United States has eschewed comprehensive federal AI legislation in favour of sector-specific regulation and executive action. President Biden's Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (October 2023) directed federal agencies to develop sector-specific AI safety guidelines. The National Institute of Standards and Technology (NIST) AI Risk Management Framework (2023) provides a voluntary risk management paradigm. The FTC has invoked existing consumer protection authority to address AI-driven deception and discrimination.

4.3 United Kingdom: Pro-Innovation Regulatory Approach

The United Kingdom's approach, articulated in the AI White Paper (2023) and subsequent Government Response (2024), favours a principles-based, sector-led regulatory framework. Rather than enacting omnibus AI legislation, the UK has directed existing regulatory bodies to apply sector-specific principles of safety, transparency, fairness, accountability, contestability, and redress.

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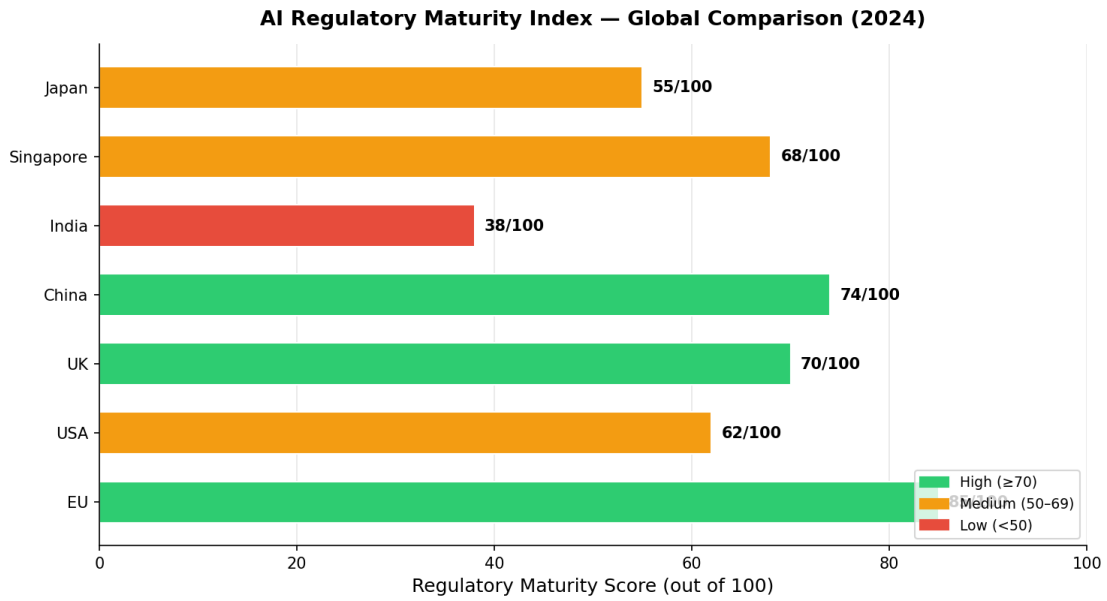

Figure 4: AI Regulatory Maturity Index — Global Comparison (2024) — Source: OECD AI Policy Observatory

5. SPECIFIC DOMAINS OF AI LIABILITY IN INDIA

5.1 Autonomous Vehicles

The deployment of autonomous and semi-autonomous vehicles in India presents particularly complex liability questions. The Motor Vehicles Act 1988 (as amended in 2019) establishes a no-fault liability regime for motor accidents, with compensation payable from insurance funds regardless of fault. However, this framework was designed for human-operated vehicles and does not address the allocation of liability among the vehicle manufacturer, software developer, mapping data provider, and the vehicle operator when an autonomous system causes an accident.

5.2 Medical AI Systems

India's healthcare system is increasingly incorporating AI diagnostic tools for radiology, pathology, and treatment planning. The Indian Medical Council Act 1956 and the National Medical Commission Act 2019 govern medical professional liability but do not address AI systems as healthcare actors. When an AI diagnostic tool recommends an incorrect treatment, causing patient harm, questions arise regarding the liability of the software company, the hospital deploying the tool, and the physician who relied on the AI recommendation.

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5.3 Algorithmic Financial Decision-Making

India's financial sector extensively employs AI for credit scoring, fraud detection, high-frequency trading, and investment advisory services. SEBI's algo-trading regulations provide some oversight of algorithmic trading, but the broader question of liability for AI-driven investment losses or discriminatory credit scoring remains unaddressed. The RBI's guidelines on financial services use of AI (2024) emphasise fairness and explainability but lack enforcement mechanisms for liability attribution.

5.4 Generative AI and Intellectual Property

The proliferation of generative AI tools, including large language models and image generators, raises novel intellectual property liability questions. When a generative AI system creates content that infringes existing copyright, defames a real person, or constitutes a deepfake, who is liable? The Copyright Act 1957 and the Information Technology Act 2000 do not address AI-generated content, creating a significant legal vacuum.

6. POLICY RECOMMENDATIONS

6.1 Enactment of a Dedicated AI Liability Statute

India requires a comprehensive AI Liability Act that: (i) adopts a risk-based classification system inspired by the EU AI Act; (ii) establishes a clear hierarchy of liability among AI developers, deployers, and users based on their degree of control and benefit; (iii) introduces mandatory incident reporting for AI systems causing harm; (iv) creates a specialised AI Injury Compensation Fund for victims of high-risk AI harms; and (v) provides for algorithmic transparency and explainability requirements in high-stakes applications.

6.2 Amendment of Existing Statutes

- The Consumer Protection Act 2019 should be amended to include a specific definition of 'AI product defect' and to extend product liability provisions to AI service providers.
- The IT Act 2000 should be amended to include provisions for mandatory AI system audits, algorithmic impact assessments, and liability for AI system operators who fail to implement adequate safety measures.
- The Motor Vehicles Act 1988 should be amended to address autonomous vehicle liability through a graduated responsibility model based on the level of vehicle autonomy.

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6.3 Institutional Strengthening

The Government of India should establish a dedicated AI Regulatory Authority with the mandate to: (i) register high-risk AI systems; (ii) conduct or commission algorithmic audits; (iii) receive and investigate AI harm complaints; (iv) impose penalties for non-compliant AI deployments; and (v) develop sector-specific AI safety standards in consultation with industry and civil society.

6.4 Judicial Capacity Building

The Supreme Court of India and High Courts should establish specialised Technology Benches with judges trained in AI and digital law. The Law Commission of India should undertake a comprehensive review of AI liability and publish a dedicated report with draft legislation. Legal aid frameworks should be enhanced to ensure that victims of AI-induced harm can access the justice system.

7. CONCLUSION

The emergence of AI as a transformative force in Indian society necessitates an urgent and comprehensive reimagining of the legal liability framework. The existing patchwork of statutes, designed for a pre-digital era, is manifestly inadequate to address the complexity, opacity, and autonomy of modern AI systems. India stands at a critical juncture: the decisions made in the next five years regarding AI governance will determine whether the country's AI revolution benefits all citizens equitably or creates new forms of technological injustice.

India's constitutional framework, particularly Articles 14 (equality), 19(1)(g) (freedom to practise any profession), and 21 (right to life and personal liberty), provides a robust normative foundation for AI governance grounded in fundamental rights. A rights-based approach to AI liability, which prioritises the dignity, safety, and autonomy of Indian citizens while enabling responsible innovation, offers the most promising path forward. As India aspires to become a global AI leader, it must demonstrate that technological advancement and legal accountability are not competing values but complementary pillars of a just and equitable digital society.

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