

REGULATING AI IN JUDICIAL DECISION MAKING: IMPLICATIONS FOR LABOUR RIGHTS AND MATERNITY BENEFITS IN INDIA

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Abstract

The growing incorporation of Artificial Intelligence in judicial and quasi-judicial decision-making represents a transformative development in India's legal system. While AI-driven tools offer efficiency and uniformity, their unregulated use poses significant risks to principles of fairness, transparency, and due process, particularly in matters concerning labour rights and maternity benefits. Consequently, a robust regulatory framework is imperative to ensure that technological innovation aligns with constitutional guarantees of equality and social justice. The incorporation of artificial intelligence into judicial processes, incorporating sophisticated legal research mechanisms, case outcome prediction and decision-support systems, marks a transformative phase in contemporary justice delivery. While these technological inventions ensure enhanced efficiency, uniformity or wider access, moreover they pose multifaceted constitutional tasks. The ambiguity of algorithmic design, the risk of perpetuation of systemic biases and the absence of robust accountability structures collectively threaten the guarantee provided by "the principle of due process under Article 21 of the constitution". This paper takes a theoretical and comparative approach using regulatory frameworks developed within the European Union and the United States and Singapore towards drawing insights for the Indian judiciary. It argues that India needs a nuanced regulatory framework incorporating transparency mandates, human-related safeguards and regular algorithmic audits to ensure judicial accountability. Importantly, the study extends the debate beyond criminal adjudication to civil and labour disputes, particularly those relating to maternity benefits and gender justice. Welfare legislations like the maternity benefits act 1961, which has been reinforced by constitutional provisions under Articles 14, 15(3) and 42, are examples of areas where judicial decision-making requires empathy and a social justice orientation. The indiscriminate use of artificial intelligence (AI) in such sensitive areas risks harming fundamental equality and undermining the protective character of welfare jurisprudence. Therefore, this paper argues that regulatory mechanisms must be carefully adjusted to reconcile the imperatives of technological progress with constitutional commitments to fairness, dignity and social justice, to make sure that artificial intelligence contributes positively rather than resulting in undermine the integrity of judicial decision-making in India.

Keyword: *Artificial Intelligence in Judiciary, Algorithmic Bias, Article 21, Constitutional Safeguards, Fair Trial, Gender Justice, Judicial Accountability, Labour Right, Maternity Benefit Act, 1961, Social Welfare Jurisprudence*

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INTRODUCTION

Artificial intelligence (“AI”) is causing profound changes in the global legal framework. Historically, the judiciary has been viewed as an institution based on precedent, considered reasoning, and procedural safeguards; however, the twenty-first century has made it necessary to strike a balance between these traditional values and the efficiencies offered by digital technologies. With its capabilities by means of large – scale data analysis, pattern recognition, and predictive modelling, (AI) has become a transformative force in the administration of Justice.

The increasing reliance on Artificial Intelligence in decision-making processes marks a significant transformation in contemporary legal systems. In India, the use of AI within judicial and quasi-judicial mechanisms raises critical concerns when such technologies intersect with the protection of labour rights and maternity benefits, which form the core of social justice jurisprudence. Despite the growing adoption of AI-driven tools, the absence of a clear regulatory framework threatens principles of fairness, transparency, and constitutional accountability. This study addresses this gap by examining the necessity of regulating AI in judicial decision-making to safeguard labour welfare and gender-based entitlements.¹

In India, the judicial system continues to face challenges, including heavy caseloads, procedural inefficiencies, and administrative burdens on judges. As per data from the National Judicial Data Grid (NJDG), more than 4.5 crore cases are pending at various levels of the judiciary.² Recognizing the potential of artificial intelligence to improve judicial efficiency and case management, the supreme court of India constituted an artificial intelligence committee in 2019.³ This institutional initiative culminated in the launch of the Supreme Court portal for assistance in court efficiency (SUPACE) in April 2021⁴, an AI-powered platform designed to assist judges in retrieving relevant case law, statutory provisions, and factual summaries from the vast records in a significantly reduced time.⁵

SUPACE is structured as an adjudicating tool rather than an adjudicating authority, ensuring that the principle of judicial independence remains intact. It does not deliver judgments or replace judicial reasoning, but rather organizes and filters information to aid judicial deliberation.⁶ This distinction is important, as the growing reliance on artificial intelligence in judicial decision – making raises significant concerns regarding its impact on the right to a fair trial, a core component of the right to life and personal liberty guaranteed under Article 21 of the Indian constitution.⁷

The constitutional implications also extend to the doctrines of natural justice, particularly the doctrine of Audi Alteram Partem.⁸ The deployment of opaque or “black box” AI systems can

¹Constitution of India, arts 14, 15(3), 21, 42;

OECD, *Artificial Intelligence and the Law* (OECD Publishing 2023);

Supreme Court of India, *Justice K.S. Puttaswamy v Union of India* (2017) 10 SCC 1.

²National Judicial Data Grid, *All India Pending Cases* (2024).

³Supreme Court of India, *Press Release on Artificial Intelligence Committee* (2019).

⁴Supreme Court Of India, *SUPACE Portal Launch Notification* (April 2021).

⁵ India AI, Alls Set to Reform Justice Delivery in India (July 2021), available at <https://indiaai.gov.in/article/ai-is-set-to-reform-justice-delivery-in-india>.

⁶*Maneka Gandhi v. Union of India*, (1978) 1 SCC 248 (India).

⁷ Constitution of India, Art. 21.

⁸ H.M. Seervai, *Constitutional Law of India*, 5th Edn, 2018, P. 420.

hinder litigants from challenging or comprehending the reasoning behind decisions driven by algorithmic tools.⁹This, by perpetuating algorithmic bias, whether it is flawed training data or limitations of structural design risks undermining the guarantee of equality cover under article 14 & 15 of Indian constitution.¹⁰These concerns acquire heightened importance in the context of labour rights and gender justice. Welfare laws like the Maternity benefits act 1961,¹¹passed pursuant to constitutional directives under Articles 14, 15(3), 21 and 42, attempt to ensure substantive equality for women workers by making maternity leave compulsory, providing protection against discrimination at the workplace and provision for humane conditions of employment. Judicial interpretation of maternity benefit disputes has reflected not just a formalist interpretation of the statutory text, but also a purposeful and empathetic approach to protecting women's dignity and socio-economic security.¹²If AI-based decision-support systems are introduced in such sensitive domains without adequate safeguards, there exists a significant risk that algorithmic bias may perpetuate and reinforce gender-based discrimination.

From a comparative perspective, the European Union's artificial intelligence act (regulation (EU) 2024/1689)¹³constitutes the first comprehensive legislative framework for the regulation of artificial intelligence. Under this act, AI systems deployed in judicial and law enforcement setting are classified as "high – risk", reflecting the potential implications for fundamental rights and legal accountability and mandates transparency obligations, human monitoring, and continuous risk assessment mechanisms.¹⁴In contrast, India lacks a dedicated statutory framework to regulate artificial intelligence in judicial contexts, instead relying on constitutional safeguards, the Information Technology Act, 2000, and scattered judicial decisions on technology adoption.¹⁵

Against this backdrop, the present theoretical research undertakes a constitutional, statutory, and judicial analysis of the integration of artificial intelligence into judicial decision making processes in India. It argues that AI presents opportunity to improve court efficiency in the judiciary and access to justice but its unregulated use threatens to erode fundamental rights, judicial accountability, and public confidence. Further, it emphasizes that the impact of AI in judicial decisions extends beyond criminal and constitutional matters to labour and welfare disputes, where judicial sensitivity remains indispensable. The maternity benefit jurisprudence, in particular, demonstrates the need for a balanced balance between efficiency and empathy to ensure that the constitutional mandate of gender justice and social welfare is not compromised by algorithmic logic.¹⁶The study recommends a balanced regulatory model that includes transparency mandates, periodic algorithmic audits, "human-in-the-loop" safeguards, and clearly defined accountability mechanisms to ensure that technological innovation operates within the constitutional mandate of fair, impartial, and reasoned justice.

⁹ Sandra Wachter, Brent Mittelstadt & Chris Russell, Why fairness can't be automated: bridging the gap between EU nondiscrimination law and AI, 41 Comput. L. & Sec. Rev. 105567 (2021).

¹⁰ Constitution of India, Art. 14, 15.

¹¹ Maternity Benefit Act, 1961, Act No. 53 Of 1961.

¹² Municipal Corporation of Delhi v. Mahila Labour (Muster Roll), (2000) 3 SCC 224 (India); Air India v. Nergesh Mirza, (1981) 4 SCC 335 (India).

¹³ European Union, Artificial Intelligence Act (Regulation (EU) 2024/1689), 2024.

¹⁴ Regulation (EU) 2024/1689, Article 6(2), 2024 OJ (L 168) 1.

¹⁵ The Information Technology Act, 2000, No. 21, Act of Parliament, 2000 (India).

¹⁶ B. Shah v. Presiding Officer, Labour Court, Coimbatore, (1977) 4 SCC 384 (India).

The incorporation of artificial intelligence (AI) into judicial processes is not an isolated development limited to technologically advanced jurisdictions, but part of a global shift toward data-driven governance in the justice sector. Courts around the world from the Estonian Ministry of Justice's AI-based "robot judge" for small claims to the United States' COMPAS risk assessment system, various jurisdictions have experimented with algorithmic tools to enhance efficiency and consistency in decision-making.¹⁷ These developments illustrate both the potential and dangers of AI adoption: automation can speed up judicial work, but it also threatens to introduce systemic biases and reduce human oversight in judicial decisions.¹⁸

India's judicial digitalization journey predates the recent AI revolution. Initiatives such as the e-Courts Project (2005), the NJDG (2015), the adoption of virtual court hearings during the COVID-19 pandemic laid the foundation for more advanced AI-based interventions.¹⁹ The launch of the Supreme Court of India Launched a Portal to Assist in Improving Court Efficiency, Known as SUPACE in 2021.²⁰ Which was a qualitative leap, indicating a well-considered policy choice to leverage AI to enhance judicial productivity.²¹ SUPACE's design reflects a hybrid approach allowing AI to handle repetitive, time-consuming tasks such as filtering instances and summarizing the records, while retaining the human judge as the final intermediary.²²

However, despite the Indian judiciary experimenting with artificial intelligence (AI), questions around accountability, transparency and protection of rights remain unresolved. In the absence of AI – specific regulation, articles 14, 19, and 21²³ provide the main constitutional protection against arbitrary technological applications.²⁴ Yet, these provisions were framed in an era when adjudication was entirely human-driven, leaving open interpretative questions about their applicability to machine-aided decision-making.²⁵

The deployment of algorithmic systems in adjudicatory processes also raises concerns regarding opacity and the erosion of reasoned decision-making, a cornerstone of the rule of law. In the absence of human oversight, AI-driven outcomes may disproportionately affect vulnerable groups, particularly workers and pregnant women seeking statutory protections. Therefore, regulatory intervention is essential to ensure that technological tools operate as aids to justice rather than substitutes for judicial accountability.²⁶

If AI systems use complex, ambiguous algorithms, the theoretical foundations of the incorporation of opaque or automated decision – making mechanism may challenge the principles of natural justice, notably the right to a fair hearing and the entitlement to reasoned

¹⁷ Richard Susskind, *Online Courts and the Future of Justice* 115–18 (2019).

¹⁸ Danielle Keats Citron, *Technological Due Process*, 85 Wash. UL Rev. 1249, 1260–64 (2008).

¹⁹ Ministry of Law and Justice, e-Courts Mission Mode Project, <https://doj.gov.in/e-courts-project/>.

²⁰ Supreme Court of India, *SUPACE Portal Launch Notification*, April 2021.

²¹ India AI, SUPACE: Supreme Court's AI Tool to Assist Judges (April 2021), <https://indiaai.gov.in/article/supace-supreme-courts-ai-tool-to-assist-judges>.

²² Interview with Justice DY Chandrachud, *AI and the Indian Judiciary*, Live Law (April 2021), <https://www.livelaw.in/>.

²³ Constitution of India Art. 14, 19 and 21.

²⁴ Justice K.S. Puttaswamy v. Union of India, (2017) 10 SCC 1 (India).

²⁵ Lawrence Lessig, *Code and Other Laws of Cyberspace* 89–94 (1999).

²⁶ Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* (Harvard University Press 2015); European Commission, *Ethics Guidelines for Trustworthy AI* (2019);

Supreme Court of India, *Maneka Gandhi v Union of India* (1978) 1 SCC 248.

decisions cornerstones of due process may be compromised if litigants, and even judges, do not fully grasp the reasoning behind AI-generated recommendations.²⁷ This ambiguity problem, often called the “black box” dilemma, has been a focus of international AI governance deliberations.²⁸

The relevance of these concerns is particularly acute in areas such as labour and welfare adjudication, where decisions affect vulnerable populations like pregnant women and new mothers seeking maternity benefits. AI-powered case management systems can streamline claims under the Maternity Benefit Act of 1961, but when not carefully regulated, may inadvertently promote structural discrimination, such as algorithmic undervaluation of informal sector claims or gender-coded bias in datasets.²⁹ Given that maternity benefits are intrinsically linked to the constitutional articles which cover under article 14 and 21, the right to equality, AI-enabled adjudication should ensure improved access rather than restrictive results.³⁰

The research needs underscore: on the one hand, the chronic backlog of cases requires urgent efficiency-enhancing measures; on the other, uncritical adoption of AI threatens to erode constitutional values. This holds especially true in the context of welfare rights jurisprudence, where AI’s potential to strengthen or undermine socio-economic rights such as maternity protection reflects the broader dilemma of balancing technological progress with constitutional provisions.³¹ This theoretical study positions the debate within the broader theoretical framework of technology regulation and emphasizes the need for rights-centric AI governance models for judicial use. The analysis will draw from comparative jurisdictions, constitutional jurisprudence, and emerging soft-law standards to propose a balanced framework that safeguards judicial independence while embracing technological invention.³²

LITERATURE REVIEW

“Artificial Intelligence and Judicial Decision-Making”: A Comparative Perspective (2021):³³ This paper published in *The International Journal of Law and Technology Provides a Comparative Analysis of How Artificial Intelligence (AI) Is Integrated into Judicial Systems across Different Jurisdictions of the United States, the European Union, and Singapore*. It underscores the importance of ensuring transparency and retaining human oversight when algorithms are used in decision-making. The authors highlight that, although AI can support legal decision-making, it must not replace human judges, as automated rulings without proper scrutiny may undermine fundamental principles of natural justice. This concern is especially pertinent in maternity benefit disputes, where individual factors such as health, workplace discrimination, or informal employment may not be properly addressed by rigid algorithmic logic.

²⁷ *Union of India v. Mohan Lal Kapur*, (1973) 2 SCC 836 (India).

²⁸ Frank Pasquale, *the Black Box Society: The Secret Algorithms That Control Money and Information* 3–5 (2015).

²⁹ Maternity Benefit Act, No. 53 of 1961, Code of India (1961).

³⁰ See *Olga Tellis v. Bombay Municipal Corporation*, (1985) 3 SCC 545 (India) (extending Article 21 to include socio-economic rights and dignity).

³¹ S. Gopalan, *Technology and Welfare Rights: Challenges to Indian Constitutionalism*, 45 *Indian J. Const. L.* 231, 238 (2022).

³² OECD, *Principles on Artificial Intelligence* (2019), <https://oecd.ai/en/ai-principles>.

³³ *Artificial Intelligence and Judicial Decision Making: A Comparative Perspective*, 2021 *Int'l J.L. & Tech.*

“Ethical and Legal Challenges of AI in the Judiciary” (2020):³⁴ Published in the *Harvard Journal of Law and Technology*, Analyzes the Ethical and Legal Challenges Arising from the Use of Artificial Intelligence in Judicial Processes. It Highlights Issues Such As Algorithmic Bias, Limited Explainability, And Possible Breaches of Data Privacy. The analysis emphasizes that public confidence in the judiciary may be eroded if decisions made by AI are perceived as ambiguous or biased. This risk is even greater in cases of maternity benefits, as women already face structural discrimination in employment; opaque AI models could further reinforce gender bias in decision-making on rights at the workplace.

“Artificial Intelligence in Indian Courts: Opportunities and Risks” (2022):³⁵Published in the *Indian Journal of Law and Technology*, provides an analysis of the extent to which artificial intelligence has integrated into India’s judicial system. It cites important developments such as the Supreme Court’s artificial intelligence-powered translation initiative and the expansion of e-courts, while cautioning against giving artificial intelligence a decisive role in important decisions. The author proposes a gradual implementation strategy supported by statutory safeguards to address transparency, interpretability, and due process obligations. Importantly, the paper highlights that women making maternity claims in India’s vast informal sector may particularly benefit from AI-enabled e-courts if designed inclusively, but may also risk exclusion if technological literacy or access is ignored.

“Regulating Artificial Intelligence in the Judiciary: Lessons from the EU Artificial Intelligence Act” (2023):³⁶This article published in the *European Law Review* examines the European Union’s Proposed *Artificial Intelligence Act* Classifies Applications Of AI In Judicial Systems As “High-Risk” Technologies. It details regulatory requirements for such systems, including conformity assessment, explicit human oversight, and comprehensive documentation. The author argues that India can draw valuable guidance from the EU’s rights-oriented regulatory approach to balance innovation with constitutional safeguards.

“AI and access to justice: impacts on vulnerable populations” (2021):³⁷Published in the *Oxford Journal of Legal Studies*, this paper examines how AI technologies can broaden or restrict access to justice depending on design and inclusivity. It argues that marginalized groups such as women in the informal economy risk exclusion if equal literacy and technological access is assumed in AI-based court processes. These insights are directly applicable to maternity benefit disputes in India, where women in rural areas may be disproportionately affected by digital legal systems.

“Digital Constitutionalism and Artificial Intelligence in Courts” (2020):³⁸This article published in the *International Constitutional Law Journal* explores the concept of “digital constitutionalism” and emphasizes that technological governance must remain grounded in constitutional values such as dignity, equality and procedural fairness. The relevance of

³⁴Harvard Journal of Law and Technology, the Judiciary, 2020.

³⁵Artificial Intelligence in Indian Courts: Opportunities and Risks, 2022 Indian JI & Tech.

³⁶Regulating AI in the Judiciary: Lessons from the EU AI Act, 2023 Eur. L. Rev.

³⁷AI and Access to Justice: Implications for Vulnerable Populations, 41 Oxford J. Legal Stud. 509 (2021).

³⁸Digital Constitutionalism and AI in the Courts, 18 Int. J. Const. L. 98 (2020).

maternity benefits lies in ensuring that automated adjudication does not compromise gender-sensitive interpretations of Articles 14, 15, 21, And 42 of the Constitution of India Protect Women's Rights to Equality and Access to Maternity Benefits.³⁹

“The future of work, artificial intelligence and employment rights” (2023):⁴⁰Published in the Industrial Law Journal, This paper studies the effect of Artificial intelligence (AI) on employment disputes and labour rights. It argues that artificial intelligence-powered systems, including workplace surveillance and automated compliance checks, have the potential to expose and exacerbate gender inequalities. In maternity benefit lawsuits, artificial intelligence can be helpful in detecting non-compliance by employers, but at the same time, it can also be misused to promote systemic discrimination by labelling pregnant employees as “less productive”.

Case law-based literature review

Sri Krishna Committee Report on Data Protection in the Landmark Case **“Justice K.S. Puttaswamy v. Union of India (2017)”**,⁴¹The Supreme Court Applied Gender-Sensitive Interpretations of Articles 14, 15, 21, And 42 of the Constitution of India to Uphold Women's Rights to Equality and Maternity Benefits. This judgment has direct impact on AI regulation, particularly with respect to personal health data in maternity claims (such as medical history during pregnancy). Protecting sensitive maternal health data from misuse by algorithms aligns with the constitutional guarantees of individual dignity and autonomy.

“State v. Loomis (Wisconsin Supreme Court, 2016)”:⁴²The court upheld the COMPAS Algorithm Has Been Utilized In Judicial Sentencing To Assess Recidivism Risk, Raising Questions About Fairness And Bias, but cautioned against its opaque nature. The case is cited in debates on AI transparency around the world. For India, this concern extends to employment disputes, where employers or tribunals may use predictive AI to assess the “risks” of maternity leave, and if left unaddressed, may lead to gender-discriminatory consequences.

Justice Chandrachud's opinion in “Anuradha Bhasin v. Union of India (2020)”:⁴³Although this case did not directly deal with AI, it emphasized the judiciary's responsibility to uphold constitutional freedoms amidst technological restrictions, especially concerning internet shutdowns. This reasoning resonates with AI in judicial contexts, particularly maternity disputes: any technological restriction or automation in adjudication must be proportionate and not deprive women of access to justice at a sensitive time such as pregnancy.

In **R. (Bridges) v. Chief Constable of South Wales Police**(Court Of Appeal, UK, 2020),⁴⁴The Court of Appeal Held That The Police's Deployment of Automated Facial Recognition Technology Violated Privacy and Data Protection Laws.This decision directly

³⁹Constitution of India, Art 14, 15,21 and 42.

⁴⁰ The Future of Work, AI and Employment Rights, 52 Indus. L.J. 417 (2023).

⁴¹ Justice K.S. Puttaswamy v. Union of India, (2017) 10 SCC 1.

⁴² State v. Loomis, 881 N.W.2d 749 (Wis. 2016).

⁴³ Anuradha Bhasin v. Union of India, (2020) 3 SCC 637 (India).

⁴⁴R (Bridges) v. Chief Constable of South Wales Police, [2020] EWCA Civ 1058 (Court Of Appeal).

addresses the process of algorithm-based decision-making in law enforcement and provides persuasive value for courts considering the use of AI in judicial evidence analysis.

K.S. Puttaswamy (Aadhaar) v. Union of India (2018):⁴⁵The Supreme Court addressed privacy concerns arising from Aadhaar's biometric system and held that technology must adhere to necessity and proportionality. In the maternity context, this principle applies directly: while AI can streamline benefit delivery (for example, Aadhaar-linked maternity benefit schemes), it should not deny rights due to authentication failures or algorithmic errors that disproportionately affect women in rural or informal areas.

RESEARCH METHODOLOGY

The present study **uses a theoretical research framework** whose primary objective is to critically analyze the legal dimensions associated by means of incorporation of Artificial Intelligence (AI) in the processes of judicial decision-making. The methodology is based on systematic examination and interpretation of established legal principles, statutory enactments, subordinate legislations, constitutional provisions, and authoritative judicial decisions of Indian and comparative courts.

The Research is doctrinal in nature and the primary sources include constitutional texts, applicable laws, policy guidelines issued by governmental and regulatory authorities, and key judicial pronouncements addressing the interrelationship of technology and adjudication.

Secondary sources include scholarly books, peer-reviewed journals, research reports and policy briefs published by reputed legal and technical research institutions. These materials are critically evaluated to identify prevailing academic approaches, gaps in existing research, and potential legal inferences of AI integration of justice delivery scheme.

The study embraces a qualitative and analytical approach, aimed at explaining and evaluating the compatibility of AI-assisted adjudication with fundamental legal values such as fairness, due process, transparency and judicial independence. Additionally, a comparative legal analysis using jurisprudence from authorities like United States, the Unitedalso encompasses the United Kingdom and the European Union. This comparative approach helps contextualize India's legal position in the broader international discourse and extract best practices that can be adapted to the domestic framework. Adopting a theoretical methodology ensures that the study remains methodologically sound, policy-oriented, and normatively grounded, enabling recommendations that are consistent with constitutional mandates and responsive to emerging technological realities.

Comparative legal systems have increasingly acknowledged the risks associated with the use of Artificial Intelligence in judicial and quasi-judicial decision-making, particularly where such technologies affect fundamental rights and welfare entitlements. The **European Union** has taken the most comprehensive regulatory approach by proposing the **EU Artificial Intelligence Act**, which categories AI systems used in judicial proceedings, employment decisions, and social welfare determinations as *high-risk systems*. These systems are subject to stringent obligations, including transparency, explain ability, human oversight, and

⁴⁵ KS Puttaswamy v Union of India (Aadhaar), (2019) 1 SCC 1 (India).

accountability, thereby recognizing that algorithmic decision-making may significantly impact individual rights.

CONSTITUTIONAL ASPECTS OF ARTIFICIAL INTELLIGENCE IN JUDICIAL PROCESSES AND THE PROTECTION OF MATERNITY RIGHTS

Comparative legal systems have increasingly acknowledged the risks associated with the use of Artificial Intelligence in judicial and quasi-judicial decision-making, particularly where such technologies affect fundamental rights and welfare entitlements. The **European Union** has taken the most comprehensive regulatory approach by proposing the **EU Artificial Intelligence Act**, which categorizes AI systems used in judicial proceedings, employment decisions, and social welfare determinations as *high-risk systems*. These systems are subject to stringent obligations, including transparency, explain ability, human oversight, and accountability, thereby recognizing that algorithmic decision-making may significantly impact individual rights.⁴⁶

The incorporation of artificial intelligence in judicial processes in India is inevitably subject to constitutional scrutiny, especially when examined in the context of gender justice and maternity protection frameworks. The Constitution not only protects fundamental rights, but also directs the State to ensure social and economic justice. As a result, any technological intervention in the judicial process must be consistent with these constitutional commitments, especially in matters relating to maternity benefits, where equality, dignity, and welfare come together.

Article 14 ensures equality before the law and the equal protection of the laws.⁴⁷ However, algorithmic tools used in adjudication are susceptible to replicating systemic discrimination embedded in historical data. If maternity claims are underestimated because training datasets reflect long-standing workplace biases against women, such results would violate the principle of non-arbitrariness, which Article 14 refers to.⁴⁸

Article 21, which secures the right to life and personal liberty, has been judicially interpreted to encompass dignity, privacy, and procedural fairness.⁴⁹ The opacity of algorithmic decision-making can undermine these protections, especially for female litigants seeking maternity assistance who may lack the resources to challenge AI-generated decisions. In the Puttaswamy case, the Supreme Court recognized informational privacy as an essential component of Article 21.⁵⁰ Mandating safeguards by AI systems when processing sensitive data related to reproductive health and employment conditions.⁵¹

Moreover, Article 42 mandates the State to provide dignified working conditions and maternity benefits, establishing a constitutional obligation to interpret laws in a gender-sensitive way.⁵² Judicial reliance on automated procedures that prioritize efficiency over contextual fairness risks undermining these protections.

⁴⁶European Commission, *Proposal for a Regulation Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) COM (2021) 206 final*.

⁴⁷Constitution of India, Art. 14.

⁴⁸ EP Royappa v. State of Tamil Nadu, (1974) 4 SCC 3.

⁴⁹Constitution of India, Art.21.

⁵⁰ Justice K.S. Puttaswamy v. Union of India, (2017) 10 SCC 1.

⁵¹ Justice K.S. Puttaswamy (Retd.) v. Union of India, (2017) 10 SCC 1

⁵²Constitution of India Art.42.

Judicial independence, enshrined in Article 50 and reinforced by jurisprudence, also calls for careful evaluation. If judicial preference in maternity disputes is excessively delegated to AI systems, the human empathy and contextual reasoning necessary to constitutional morality may be diminished. AI may boost judicial efficiency, but the final word must remain with judges to ensure constitutional accountability and substantive justice.⁵³

In short, the constitutional dimensions of artificial intelligence in the judicial process go beyond technical concerns. The challenge lies in reconciling efficiency and constitutional values safeguarding the invention does not come at the cost of equality, dignity, and gender-sensitive justice.

LEGAL AND THE REGULATORY CHALLENGES POSED BY AI IN ADJUDICATION OF MATERNITY BENEFITS

The integration of artificial intelligence (AI) in the judicial decision-making exposes serious deficiencies in India's statutory and regulatory framework, particularly in the adjudication of maternity benefit disputes. Although Acts such as the act of 1961 the maternity benefits act⁵⁴ and the 1948 act of Employees' State Insurance Act⁵⁵ establish fundamental rights for the women workers, these laws were drafted in a pre-digital age and are silent on the operation of AI-powered judicial mechanisms.⁵⁶ The absence of a specialized statutory regime to regulate algorithmic interventions poses a twofold risk: first, AI systems may inadvertently reproduce gender biases embedded in historical justice laws or employment data; and second, procedural protections, including the right to a hearing, transparency in reasoning, and judicial accountability, may be affected by opaque algorithmic processes.⁵⁷

In maternity benefit disputes, where socio-economic vulnerability and gender justice are central concerns, reliance on unregulated AI tools without statutory oversight could undermine constitutional protections as assured by Articles 14, 15, 21 & 42 of constitution of India.⁵⁸ Thus, the challenges are not only in designing AI tools, but also to ensure their application in maternity adjudication takes place within a clear regulatory framework that preserves substantive and procedural justice.⁵⁹

JUDICIAL PRECEDENTS AND COMPARATIVE PERSPECTIVE

In the Indian context, judicial precedents have consistently emphasized the constitutional importance of maternity benefits as an extension of the rights to equality, dignity, and social justice.⁶⁰ In *Municipal Corporation of Delhi v. Women Workers (Muster Roll)*,⁶¹ the Supreme Court held that maternity relief is not merely a statutory entitlement but a fundamental component of gender justice guaranteed under Articles 14 and 21 of the Constitution.⁶² Similarly, in *Shah v. Presiding Officer, Labour Court, Coimbatore*, the Court⁶³ underscored

⁵³ *Union of India v. Sankalchand Himmatlal Sheth*, (1977) 4 SCC 193.

⁵⁴ Maternity Benefit Act, 1961, Act No. 53 Of 1961.

⁵⁵ Employees' State Insurance Act, 1948, Act No. 34 Of 1948.

⁵⁶ Maternity Benefit Act, 1961, No. 53, Act of Parliament, 1961 (India); Employees' State Insurance Act, 1948, No. 34, Act of Parliament, 1948 (India).

⁵⁷ Cary Coglianese and David Lehr, Regulation by robots: administrative decision making in the machine-learning age, 105 Geo. L. J. 1147, 1162–68 (2017).

⁵⁸ Constitution of India Articles 14, 15, 21 and 42.

⁵⁹ Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* 27–30 (2015).

⁶⁰ Constitution of India, Art. 14. (*Right to Equality*). Art. 21. (*Right to Life and Dignity*). Preamble. (*Social Justice*).

⁶¹ *Municipal Corporation of Delhi v. Women Workers (Muster Roll)*, (2000) 3 SCC 224.

⁶² Constitution of India, Art. 14 & 21.

that protective legislation, such as the Maternity Benefit Act, 1961,⁶⁴ must be interpreted in a manner that advances the constitutional objective of safeguarding the health and dignity of working women.

In the Indian context, judicial precedents have consistently underlined the constitutional significance of maternity benefits as an extension of the equality right, dignity, and social justice. In *Municipal Corporation of Delhi v. Women Workers (Muster Roll)*,⁶⁵ The Supreme court held that maternity relief is not merely a statutory entitlement but a fundamental component of gender justice guaranteed under article 14 and 21 of the Indian constitution. Similarly, in *Shah v. Presiding Officer, Labour Court, Coimbatore*,⁶⁶ the court underscored that protective legislation such as the Maternity Benefit Act, 1961 must be interpreted in a manner that furthers the constitutional vision of protecting the health and dignity of working women. These precedents collectively establish that adjudication of maternity benefit disputes requires not just a technical assessment of statutory rights but also a purposive interpretation consistent with constitutional morality.

These judicial standards become even more important when juxtaposed with the rise of artificial intelligence in judicial functions. If algorithmic decisions are applied in maternity benefit cases, they must be consistent with interpretative principles developed by Indian courts to prevent mechanical application of rules that ignore socio-economic vulnerabilities. For example, a rigid algorithm trained on a limited dataset forget to acknowledge the contextual realities challenges experienced by women in the informal sector, thereby undermining the constitutional order articulated in *Delhi Municipal Corporation*.⁶⁷

Comparatively, global experiences offer useful lessons. In the European Union, the *General Data Protection Regulation (GDPR)*⁶⁸ also the proposed AI Act⁶⁹ emphasize the need for openness, human supervision, and impact assessment in high-risk artificial intelligence applications, including in judicial decision-making. In the United States, while courts remain wary of algorithmic tools in judicial decisions, scholars highlight due process concerns where litigants are unable to challenge algorithmic reasoning.⁷⁰ Singapore offers a middle ground, where experimental AI case triaging systems are designed to assist judicial discretion, not replace it.⁷¹ These comparative insights demonstrate that jurisdictions committed to gender equality and procedural fairness demand a regulatory framework that ensures that AI enhances, rather than diminishes, the justice delivery process.

Thus, the incorporation of artificial intelligence (AI) in adjudicating maternity benefit claims Disputes in India will not only require drawing upon its rich constitutional jurisprudence but also being mindful of global best practices. A hybrid model, based on judicial precedents and

⁶³ *Shah v. Presiding Officer, Labour Court, Coimbatore*, (1978) 4 SCC 257.

⁶⁴ Maternity Benefit Act, 1961, Act No. 53 Of 1961.

⁶⁵ *Municipal Corporation of Delhi v. Women Labour (Muster Roll)*, (2000) 3 SCC 224 (India).

⁶⁶ *Shah v. Presiding Officer, Labour Court, Coimbatore*, (1978) 4 SCC 257 (India).

⁶⁷ Id.232-33.

⁶⁸ Regulation 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, 2016 OJ (L 119) 1 [hereinafter GDPR].

⁶⁹ Proposal for a Regulation of the European Parliament and of the Council laying down harmonized rules on artificial intelligence (Artificial Intelligence Act), COM(2021) 206 final (April 21, 2021).

⁷⁰ Cary Coglianese and David Lehr, Regulation by robots: administrative decision making in the machine-learning age, 105 Geo. L. J. 1147, 1175–78 (2017).

⁷¹ See generally Mark Findlay and Lim How Khang, Artificial Intelligence and the Rule of Law in Singapore, 33 Sing. Acad. L.J. 302, 318–25 (2021).

supported by regulatory safeguards, appears best suited to reconcile technological innovation with the constitutional promise of gender-sensitive justice.

ETHICAL CONCERNS AND HUMAN RIGHTS DIMENSIONS IN AI-MEDIATED DECISION-MAKING OF MATERNITY BENEFITS

In the **United States**, although there is no uniform federal legislation regulating AI in judicial decision-making, courts and scholars have expressed serious due process concerns regarding algorithmic opacity. In *State v. Loomis*, the Wisconsin Supreme Court acknowledged the risks posed by proprietary algorithms in sentencing decisions, particularly the inability of affected individuals to meaningfully challenge automated outcomes. This case has been widely cited in legal scholarship as highlighting the tension between algorithmic efficiency and procedural fairness.⁷² Academic commentary further warns that algorithmic tools used in employment and welfare adjudication may reinforce existing socio-economic biases, disproportionately affecting vulnerable groups.⁷³

Adjudication of maternity benefits is inextricably linked with the defense Maternity Benefits Form an Integral Part of Fundamental Social Rights, Particularly Women's Rights to Equality, Dignity, Livelihood, and Health. Ethical concerns are further heightened when artificial intelligence (AI) systems are introduced into this sensitive area without adequate safeguards. Automated adjudication, when based on biased datasets or rigid algorithmic frameworks, risks transforming the lived realities of women workers, especially those in precarious or informal employment, into abstract, mechanical outcomes. This undermines the statutory vision of fundamental equality and gender justice.

The Indian judiciary has consistently emphasized the Maternity benefits are not merely a statutory right but are an integral part of the realization of constitutional guarantees. In *Municipal Corporation of Delhi v. Mahila Shramik (Muster Roll)*, the Supreme Court, invoking the principles of social justice, dignity, and the protections under Article 21, held that women engaged on a casual or daily-wage basis are also legally entitled to receive maternity benefits.⁷⁴ Similarly, In *B. Shah v. Presiding Officer, Labour Court, Coimbatore*, and the Court lay emphasis on liberal and purposive interpretation of protective labor legislation purposive interpretation of maternity laws and held that these should be interpreted to advance the welfare of women rather than restrict it.⁷⁵

Incorporating artificial intelligence (AI) into this judicial framework raises ethical dilemmas. If algorithms priorities efficiency and uniformity over contextual sensitivity, they risk ignoring vulnerabilities that courts have historically identified as requiring special protection. For example, such an approach could underestimate the socio-economic marginalization of women in rural areas or entrench discriminatory practices of employers by treating motherhood as an economic obligation rather than a constitutional right.

From a human rights perspective, any AI-mediated system must comply with constitutional guarantees under Articles 14, 15, 21 and 42, as well in alignment with India's obligations

⁷²*State v Loomis* 881 NW 2d 749 (Wis 2016).

⁷³Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* (Harvard University Press 2015).

⁷⁴ *Municipal Corporation of Delhi v. Women Labour (Muster Roll)*, (2000) 3 SCC 224.

⁷⁵ *B. Shah v. Presiding Officer, Labour Court, Coimbatore*, (1978) 4 SCC 257.

under the convention on the elimination of all forms of discrimination against women (CEDAW) and the relevant international labour organization conventions on maternity protection.⁷⁶Ethically, principles of transparency, accountability and “human-in-the-loop” monitoring are essential to ensure that judicial sensibility is not lost in technological abstraction. AI should therefore not be seen as a replacement for judicial reasoning, but as a complementary tool that enhances access while upholding the constitutional and human rights commitments inherent in maternity jurisprudence.

REGULATORY AND POLICY FRAMEWORK - NATIONAL AND INTERNATIONAL PERSPECTIVES

The incorporation of artificial intelligence (AI) in resolving maternity benefit disputes necessitates a strong governing and policy structure which balances efficiency by the safeguarding of fundamental rights. At the national level, India’s statutory provisions on maternity benefits are primarily governed by The Maternity Benefit Act, 1961, together with The Employees’ State Insurance Act, 1948 and allied labour welfare laws. These statutes seek to implement the constitutional mandate under Articles 14, 15(3), 21, and 42, ensuring that maternity relief is recognized as an aspect of gender justice and social welfare.⁷⁷However, while these laws define fundamental rights, they remain silent on the regulatory framework required to govern AI-assisted adjudication. The absence of specific legislative guidance risks uncritical adoption of algorithmic systems

In recent years, the Digital India initiative and the move towards e-courts have accelerated the adoption of digital technologies in judicial administration.⁷⁸Yet, no dedicated regulatory framework exists for algorithm-based decision-making in labour and social welfare disputes. To protect maternity rights in this period of artificial intelligence (AI), India must develop statutory standards that mandate algorithmic transparency, bias audits, and human oversight in judicial processes. Such reforms are necessary to ensure that artificial intelligence (AI) applications do not undermine the objective and welfare-oriented interpretation of maternity law developed by Indian courts.

Internationally, several jurisdictions have begun formulating policy responses to AI in judicial contexts. “The European Union’s Artificial Intelligence Act (2021) adopts a risk-based framework”, placing judicial AI in the “high risk” category and subjecting it with strict, “transparency”, accountability, and compliance with fundamental rights.⁷⁹Similarly, the European Council’s Ethical Charter on AI in the Judiciary (2018) outlines the principles of non-discrimination, user control, and “admiration to human rights” as prerequisites for the deployment of AI in courts.⁸⁰These frameworks offer valuable lessons for India, where maternity disputes are often linked to socio-economic backwardness and gender-based discrimination.

⁷⁶ Convention on the Elimination of All Forms of Discrimination against Women, 18 December 1979, 1249 UNTS 13; Maternity Protection Convention (No. 183), 15 June 2000, 2181 UNTS 229.

⁷⁷ Maternity Benefit Act, No. 53 of 1961, India Code (1961); Employees' State Insurance Act, No. 34 of 1948, India Code (1948).

⁷⁸ Ministry of Law and Justice, Government of India, *e-Courts Mission Mode Project* (Phase III, 2023).

⁷⁹ Proposal for a Regulation of the European Parliament and of the Council setting out harmonized rules on artificial intelligence (Artificial Intelligence Act), COM(2021) 206 final.

⁸⁰ European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and Their Environments, European Commission for the Efficiency of Justice (CEPEJ), Council of Europe (2018).

Moreover, “India’s obligations under international labour and human rights agreements” such as “The International Labour Organization Maternity Protection Convention (No. 183, 2000)” and the “Convention on the Elimination of All Forms of Discrimination against Women (CEDAW, 1979)” require that technological innovations in judicial decisions be made consistent with global commitments to equality and social justice.⁸¹ Thus, both domestic and international views are unanimous on the principle that artificial intelligence (AI) must be subordinated to human rights in judicial decision-making, and ensure that maternity benefits are interpreted not just as statutory rights but also as mandatory guarantees of women’s dignity and equality.

- (a) **Issues Related with Data Security and Confidentiality:** Artificial intelligence methods which are used in adjudicating maternity benefit claims rely on sensitive personal and medical data of female employees. In India, the digital personal data protection act, 2023, provides a comprehensive legal framework governing the collection, processing, and protection of personal data but does not create sector-specific safeguards for judicial or welfare decisions. Given⁸² the sensitive nature of reproductive health and employment data, maternity benefit adjudication systems using AI must adopt high thresholds of privacy and informed consent.
- (b) **Algorithmic Bias and Equality Jurisprudence:** Indian constitutional law, through the article 14 and 15(3), recognizes both equality before the law and allowsto facilitate affirmative measures in favor of women.⁸³ However, AI-driven adjudications risk giving rise to structural biases against women employed in informal sectors or precarious employment, where documentation of maternity rights is often incomplete. Comparative experiences from the United States highlight how biased training data in employment and welfare-related AI tools have disproportionately disadvantaged women.⁸⁴
- (c) **Judicial Capacity Building and Human-in-the-Loop Safeguards:** The success of artificial intelligence (AI) in judicial functions depends not only on rules, but also on the ability of judges and tribunal members to monitor algorithmic tools. For maternity disputes, which often involve nuanced interpretations of welfare laws, mandatory human-in-the-loop safeguards are necessary to prevent mechanical application of statutory provisions.⁸⁵ Courts must retain interpretive discretion to mold the law in line with constitutional values of dignity and gender justice.
- (d) **Sector-Specific Standards for Labour and Social Security Disputes:** International policy debates suggest the need for sector-specific AI governance frameworks, particularly in areas involving social security and welfare rights. The OECD AI Principles (2019) recommend that States adopt context-sensitive regulatory mechanisms where human rights are most at risk.⁸⁶ Maternity benefit adjudication falls squarely into this

⁸¹ Convention on the Elimination of All Forms of Discrimination against Women, 18 December 1979, 1249 UNTS 13; Maternity Protection Convention (No. 183), 15 June 2000, 2181 UNTS 229.

⁸² Digital Personal Data Protection Act, No. 22 of 2023, India Code (2023).

⁸³ Constitution of India Article 14, 15(3).

⁸⁴ Pauline T. Kim, *Data-driven discrimination in the workplace*, 58 Wm. & Mary L. Rev. 857, 862–68 (2017).

⁸⁵ Cary Coglianese and David Lehr, *Regulation by robots: administrative decision making in the machine-learning age*, 105 Geo. L. J. 1147, 1182–83 (2017).

⁸⁶ OECD, *Council Recommendation on Artificial Intelligence*, OECD/LEGAL/0449 (May 22, 2019).

“high-risk” area, requiring dedicated regulatory standards separate from commercial AI applications.

- (e) **Harmonization with International Labour Standards:** India’s ratification of CEDAW and alignment together In Accordance With the International Labour Organization’s Maternity Protection Convention, 2000 (No. 183), imposes an obligation to ensure that the use of technology in adjudication fails to compromise women’s fundamental rights.⁸⁷ In fact, the UN Working Group on Artificial Intelligence and Gender Equality has emphasized the utilization of artificial intelligence in the administration of justice must be carefully monitored to prevent indirect discrimination against women seeking maternity rights.⁸⁸
- (f) **Public Accountability and Transparency:** Unlike traditional adjudication, AI-driven adjudication often lacks reasoning, making it difficult for claimants to challenge wrongful denials of maternity benefits. Comparative approaches framework like the EU AI Act’s requirement for interpretability and the Singapore Model AI governance framework (2020) provide illustrative models that India could adopt to mandate public accountability and transparency in algorithmic adjudication tools.⁸⁹

The **United Kingdom** has adopted a more principles-based regulatory model, emphasising ethical governance rather than strict statutory control. Through policy documents such as the Ethics and Governance of AI in the Justice System, the UK Ministry of Justice underscores the importance of explain ability, judicial accountability, and human decision-making authority. This approach reflects an understanding that AI should function as a decision-support tool rather than a substitute for judicial reasoning, thereby preserving the integrity of the adjudicatory process.⁹⁰

Collectively, these foreign approaches demonstrate a growing consensus that while AI may enhance efficiency in legal systems, its deployment in adjudicatory contexts must be carefully regulated to prevent erosion of due process, equality, and social justice. The absence of a similarly structured regulatory framework in India highlights a critical normative and legal gap, particularly in matters involving labour rights and maternity benefits, which demand heightened constitutional protection.⁹¹

RECOMMENDATIONS AND WAY FORWARD FOR INDIA

- (a) **Establish a Specific Regulatory Framework for Artificial Intelligence (AI) in Social Security Decisions:** Given the sensitivity of maternity benefits, India should not rely on general artificial intelligence (AI) governance norms. Instead, it should create sector-specific rules that govern artificial intelligence (AI)-assisted decisions in labour and social welfare disputes. Such a framework should set standards for transparency, explain

⁸⁷ Convention on the Elimination of All Forms of Discrimination against Women, 18 December 1979, 1249 UNTS 13; Maternity Protection Convention (No. 183), 15 June 2000, 2181 UNTS 229.

⁸⁸ UN Women, *Gender Equality and AI: Challenges and Opportunities in the Justice Sector* (2021).

⁸⁹ Proposal for a Regulation by the European Parliament and by the Council to set out harmonized rules on artificial intelligence (Artificial Intelligence Act), COM (2021) 206 final; Singapore Infocomm Media Development Authority, *Model AI Governance Framework* (2nd edition 2020).

⁹⁰ UK Ministry of Justice, *Ethics and Governance of Artificial Intelligence in the Justice System* (2020).

⁹¹ OECD, *Artificial Intelligence, Human Rights, Democracy and the Rule of Law* (OECD Publishing 2021).

ability, and accountability when algorithms are used to adjudicate maternity benefit claims.⁹²

- (b) **Mandatory Human Oversight in Maternity Disputes:** Although artificial intelligence can assist in resolving claims or identifying precedents, maternity benefit disputes must be ultimately adjudicated by a human judicial officer.⁹³ Human-in-the-loop safeguards would ensure that algorithm-based decision-making does not violate women's constitutional rights to "Equality (Article 14), protection against discrimination (Article 15 (3)), and dignity (Article 21)".⁹⁴
- (c) **Integration of Gender-Sensitive Training Data:** AI tools should be trained on gender-sensitive datasets that reflect the diverse realities "of women in India", including those working "in the informal sector".⁹⁵ Without proper training, there is a risk that algorithms may perpetuate patriarchal biases embedded in existing case law or workplace data. The state should create such inclusive datasets in collaboration with trade unions and women's rights organizations.⁹⁶
- (d) **Strengthening Data Privacy and Confidentiality Safeguards:** Since maternity disputes involve sensitive health and employment data, robust privacy mechanisms must be integrated into AI adjudication systems.⁹⁷ Adherence to the Digital Personal Data Protection Act, 2023,⁹⁸ together with sector-specific privacy regulations, must be implemented to ensure that women's reproductive and medical data are not misused.
- (e) **Capacity Building for Judges and Tribunal Members:** Judicial officers and labour tribunal members should receive special training about the ethical usage of Artificial Intelligence in welfare decisions.⁹⁹ The training should focus on both technological literacy and constitutional interpretation to ensure that judges can critically evaluate algorithmic outcomes while safeguarding gender justice.
- (f) **Harmonization with International Labour Standards:** India must align its AI governance in judicial processes with its obligations under the International Labour Organization's Maternity Protection Convention, No. 183 and CEDAW.¹⁰⁰ This requires ensuring that technological interventions enhance rather than diminish the fundamental rights guaranteed to women under these international treaties.
- (g) **Transparent and Accessible Grievance Redressed Mechanisms:** Women denied maternity benefits by artificial intelligence (AI)-assisted processes should have the right to appeal, review and challenge decisions through accessible channels.¹⁰¹ Building on the emphasis on explain ability in the EU Artificial Intelligence Act, India should ensure that

⁹² OECD, Council Recommendation on Artificial Intelligence, OECD/LEGAL/0449 (May 22, 2019).

⁹³ Cary Coglianese and David Lehr, Regulation by robots: administrative decision making in the machine-learning age, 105 Geo. L. J. 1147, 1182-83 (2017).

⁹⁴ Constitution of India Arts 14, 15(3), 21.

⁹⁵ *AI for Inclusive Societal Development*, NITI Aayog, https://niti.gov.in/sites/default/files/2025-10/Roadmap_On_AI_for_Inclusive_Societal_Development.pdf.

⁹⁶ IT for Change, Re-wiring India's Digitalizing Economy for Women's Rights and Wellbeing, <https://itforchange.net/digital-economy-womens-rights-wellbeing-india>.

⁹⁷ Digital Personal Data Protection Act, No. 22 of 2023, India Code (2023).

⁹⁸ Digital Personal Data Protection Act, 2023, Act No. XX of 2023.

⁹⁹ Vidushi Marda and Shivangi Narayan, Building AI Literacy in Judicial Systems, Article 19 (2020).

¹⁰⁰ Maternity Protection Convention (No. 183), June 15, 2000, 2181 UNTS 229; Convention on the Elimination of All Forms of Discrimination against Women, December 18, 1979, 1249 UNTS 13.

¹⁰¹ Proposal for a Regulation of the European Parliament and of the Council setting out harmonised rules on artificial intelligence (Artificial Intelligence Act), COM(2021) 206 final.

women are informed about how decisions were made and on what grounds they can challenge them.

- (h) **Public-Private Collaboration in Responsible AI Development:** Since many AI tools are developed by private firms, the State should adopt a co-regulatory model where government agencies, AI developers, and civil society organizations collaborate to guarantee adherence to ethical and legal safeguards in welfare-related decision-making.¹⁰²

CONCLUSION

The incorporation of Artificial Intelligence (AI) into judicial processes grants both the prospects and experiments for the Indian justice system. In the context of maternity benefits, artificial intelligence possesses the potential to improve efficiency, consistency, and accessibility in the judicial process, particularly in reducing delays that often disadvantage female claimants. Yet, the unregulated or poorly designed use of such technologies risks exacerbating structural inequalities, undermining constitutional guarantees of equality, dignity and social justice, compromising fundamental right to a fair trial.¹⁰³

Therefore, an elusive stability has to be run into technological innovation & rights-based adjudication in adjudication in maternity benefit disputes. The constitutional framework under the constitution article 14,15(3) & 21, along by way of India's universal commitments under the (ILO) International Labour Organization Convention No. 183 and CEDAW, mandates the State to ensure that artificial intelligence is used not merely as a tool for administrative convenience but also as a means for the gradual realization of women's socio-economic rights.¹⁰⁴

Going forward, India should pursue multi-pronged strategy: a dedicated Regulatory framework for Artificial Intelligence in social welfare decisions, mandatory human oversight, robust data privacy protections, and gender-sensitive datasets. Equally important is the need for judicial and institutional capacity building, ensuring that courts and tribunals are able to critically evaluate algorithmic tools, rather than disregard them without question.¹⁰⁵

Ultimately, the validity of AI in judicial decision-making will hinge on whether it reinforces, rather than compromises, the constitutional principle of social justice. By incorporating transparency, accountability, and inclusiveness into AI governance, India can transform technology from a potential source of discrimination to a catalyst of genuine equality. In the sensitive area of maternity benefits, such a transformation is not only desirable but also imperative to achieve gender justice in the digital age.¹⁰⁶

¹⁰² Singapore Infocomm Media Development Authority, Model AI Governance Framework (2nd ed. 2020).

¹⁰³ Cary Coglianese and David Lehr, Regulation by robots: administrative decision making in the machine-learning age, 105 Geo. L. J. 1147, 1156–58 (2017).

¹⁰⁴ Constitution of India Articles 14, 15(3), 21; Maternity Protection Convention (No. 183), June 15, 2000, 2181 UNTS 229; Convention on the Elimination of All Forms of Discrimination Against Women, December 18, 1979, 1249 UNTS 13.

¹⁰⁵ Vidushi Marda and Shivangi Narayan, Building AI Literacy in Judicial Systems, Article 19 (2020).

¹⁰⁶ OECD, Council Recommendation on Artificial Intelligence, OECD/LEGAL/0449 (May 22, 2019).