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From Human Managers to Algorithms:

Reimagining Labour Law for the AI Economy in India

~ P V Visruth

Abstract

This research paper undertakes a comprehensive doctrinal and comparative analysis of the integration of Artificial Intelligence (AI) in employment, focusing on the legal challenges posed by algorithmic management in India. As workplaces transition from traditional human-led hierarchies to automated, data-driven systems, existing labour protections face unprecedented conceptual and practical strain. This paper examines the constitutional dimensions of AI deployment particularly concerning equality, privacy, and natural justice and scrutinizes the adequacy of India's newly consolidated Labour Codes and the Digital Personal Data Protection Act, 2023. Highlighting severe doctrinal gaps such as the accountability vacuum, automated dismissals, and pervasive surveillance, the paper draws on comparative lessons from the European Union and the International Labour Organization. Ultimately proposing a normative framework for a rights-based AI governance model in India that balances technological innovation with the fundamental rights of workers.

Keywords: Algorithmic Management | Artificial Intelligence | Indian Labour Law | Gig Economy | Workplace Surveillance

I. Introduction

The historical trajectory of work has undergone profound shifts, evolving from the physical mechanization of the Industrial Revolution to the hyper-connectivity of the Digital Economy, and presently arriving at the dawn of the AI Economy. At the heart of this contemporary transformation is the rapid rise of "algorithmic management," a paradigm where software algorithms perform supervisory functions traditionally exercised by human managers. Initially popularized within the gig economy and digital platform work, algorithmic management has now permeated conventional workplaces, resulting in AI systems increasingly replacing human managerial discretion in tasks ranging from hiring to firing.

This paradigm shift presents a profound legal problem: India's existing labour laws were designed to regulate human employers, not opaque, autonomous algorithms. Consequently, the delegation of managerial authority to artificial intelligence threatens to circumvent established workplace protections and constitutional guarantees.

To address this doctrinal crisis, this paper investigates the following interconnected research questions:

- 1) How does algorithmic management transform the traditional employer–employee relationship under Indian labour law?
- 2) Whether the existing Indian labour law framework adequately regulates AI-driven employment decisions?
- 3) To what extent do AI-enabled workplace practices implicate constitutional guarantees relating to equality, privacy, dignity, livelihood, and procedural fairness?
- 4) What lessons can India derive from international regulatory developments governing AI in employment?
- 5) What reforms are necessary to establish an accountable legal framework for algorithmic management?

Correspondingly, the primary objectives of this research are to examine the emergence of AI-driven management, critically analyze the adequacy of Indian labour legislation, assess the

constitutional implications, compare Indian law with international regulatory developments, and recommend robust reforms for responsible AI governance.

II. Understanding Algorithmic Management and AI in Employment

To legally evaluate algorithmic management, it is first necessary to establish its technological contours. Artificial Intelligence (AI) refers to machine-based systems capable of inferring from input data how to generate outputs such as predictions, content, or decisions. Machine Learning (ML), a critical subset of AI, involves systems that learn and adapt from data patterns without explicit human programming.¹ Building upon these technologies, "*Algorithmic Management*" refers to a diverse set of technological tools and techniques to remotely manage workforces, relying heavily on data collection and surveillance to enable automated or semi-automated decision-making.

The types of workplace AI deployed today are extensive. Common examples include AI-driven hiring platforms that screen resumes, automated scheduling software, pervasive productivity monitoring applications, algorithms dictating promotions or performance scoring, dynamic wage calculation mechanisms, and even automated termination protocols used by gig platforms.²

The structural evolution of the workplace can be conceptualized as a shift from Traditional Management, characterized by human interaction, to the Human Manager utilizing digital tools, directly to Algorithmic Management, which frequently culminates in "Black Box Decision Making".³ In a black box system, the input (worker data) and the output (managerial decision) are visible, but the internal logic connecting the two is opaque and unintelligible even to the software's operators.

Labour law inherently struggles to regulate AI because traditional legal doctrines are premised on human agency, identifiable intent (such as *mens rea* in discrimination), and a transparent chain of accountability. Algorithms, however, decentralize decision-making and obscure intent, rendering traditional labour protections structurally mismatched to modern realities.

¹ Stuart Russell & Peter Norvig, *Artificial Intelligence: A Modern Approach* 2-4 (4th ed. 2020)

² Valerio De Stefano, "*Negotiating the Algorithm*": Automation, Artificial Intelligence, and Labour Protection, 41 Comp. Lab. L. & Pol'y J. 15, 18-20 (2019)

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

Critical Analysis: The current legal conceptualization of the workplace fundamentally fails to recognize the algorithm as an actor. By treating AI as a mere neutral tool rather than a quasi-managerial agent, the law permits employers to shield themselves behind technological complexity, resulting in a systemic dilution of workers' rights and highlighting a normative gap in the attribution of employer liability.

III. Existing Indian Legal Framework Governing AI in Employment

The Indian legal framework must be assessed across constitutional principles, statutory labour laws, and data protection regulations to determine its efficacy in governing AI.

A. Constitutional Framework

The Constitution of India provides the foundational bedrock for workers' rights. Article 14, which guarantees equality before the law and equal protection of the laws, is directly implicated by algorithmic discrimination.⁴ When AI systems rely on biased historical data, they risk perpetuating structural inequalities, potentially violating the constitutional mandate against arbitrariness. Furthermore, Article 19(1)(g) ensures occupational freedom; however, arbitrary platform restrictions or algorithmic lock-outs in the gig economy severely restrict this right.

Most crucially, Article 21 guarantees the right to life and personal liberty, encompassing the right to privacy, dignity, livelihood, and procedural fairness. The landmark judgment in *Justice K.S. Puttaswamy (Retd.) v. Union of India*⁵ firmly established informational privacy as a fundamental right, directly challenging invasive AI workplace surveillance. Furthermore, cases like *Olga Tellis v. Bombay Municipal Corporation*⁶ recognized livelihood as an integral part of Article 21, while *Maneka Gandhi v. Union of India*⁷ and *E.P. Royappa v. State of Tamil Nadu*⁸ entrenched the requirement for fair, just, and non-arbitrary procedures standards that black-box algorithms routinely fail to meet.

B. Labour Law Framework

India's modern employment law is encapsulated in four consolidated codes: The Code on Wages, 2019; the Industrial Relations Code, 2020; the Occupational Safety, Health and Working

⁴ India Const. art. 14

⁵ 2019 (1) SCC 1

⁶ 1986 AIR 180

⁷ 1978 AIR 597

⁸ (1974) 4 S.C.C. 3

Conditions Code, 2020; and the Code on Social Security, 2020.⁹ A critical examination reveals that these Codes do not contemplate AI managers, automated dismissal, AI surveillance, or algorithmic ratings. The short answer to whether they adequately address these modern realities is unequivocally no. These statutes are drafted with the assumption of human-to-human dispute resolution and human-centric disciplinary proceedings.

C. Data Protection

The Digital Personal Data Protection Act (DPDP), 2023, provides the primary statutory mechanism for addressing workplace data practices.¹⁰ While the Act requires employee consent for processing data, the inherent power imbalance in employment relationships renders such consent largely illusory. Furthermore, while it touches upon workplace surveillance and the processing of employment data, it suffers from broad exemptions and lacks explicit limitations on automated decision-making.

Critical Analysis: While these constitutional and legal instruments provide fragmented protections, none directly regulates algorithmic decision-making in employment, leaving significant legal uncertainty. The doctrinal gap lies in relying on a fractured framework of constitutional torts and basic data privacy laws to govern complex algorithmic harms. Drawing on comparative insights, India's lack of specific statutory rights against automated processing falls short of international normative standards, necessitating targeted legislative intervention.

IV. Legal Challenges Created by Algorithmic Management

The deployment of algorithmic management generates distinct, interconnected legal challenges that test the boundaries of existing jurisprudence.

1 Algorithmic Bias and Employment Discrimination

AI systems are prone to reproducing and amplifying existing societal biases, particularly in hiring and promotions.¹¹ Because AI algorithms often rely on historical data to predict future performance, they can engage in proxy discrimination using seemingly neutral data points (like

⁹ The Code on Wages, No. 29 of 2019, India Code (2019);

¹⁰ The Digital Personal Data Protection Act, No. 22 of 2023, India Code (2023)

¹¹ Solon Barocas & Andrew D. Selbst, *Big Data's Disparate Impact*, 104 Cal. L. Rev. 671, 674 (2016).

pin codes or language proficiency) that correlate strongly with protected characteristics like caste, gender, or religion. The opacity of these systems makes it nearly impossible for affected employees to prove discriminatory intent. Consequently, one must critically ask: Can AI satisfy the anti-arbitrariness mandate of Article 14? Currently, it cannot, as algorithmic discrimination is often invisible to the aggrieved party.

Critical Analysis: The legal issue is the inability of traditional anti-discrimination law, which relies on proving intent or identifiable disparate impact, to capture opaque algorithmic bias. The doctrinal gap is the absence of algorithmic auditing mandates in Indian law. Normatively, Article 14's equal protection must be interpreted to impose an affirmative obligation on employers to prove the algorithmic neutrality of their systems.

2 Workplace Surveillance and Privacy

Modern AI relies on relentless data extraction through GPS tracking, facial recognition, biometrics, and intrusive productivity software that monitors keystrokes and screen activity.¹² This raises fundamental questions about workplace privacy. Is employee consent under the DPDP Act meaningful when the alternative is termination or loss of livelihood? The challenge is determining where the legal line between legitimate managerial supervision and constitutionally impermissible, intrusive surveillance should be drawn.

Critical Analysis: Under *Puttaswamy*, privacy infringements require legality, necessity, and proportionality. Current continuous AI surveillance fails the proportionality test. The gap exists because Indian labour law lacks specific workplace privacy protections, relying instead on generalized data protection. A dedicated statutory boundary must be established to outlaw continuous biometric and emotional surveillance in the workplace.

3 Explainability and Natural Justice

The principles of Natural Justice, particularly *Audi Alteram Partem* (the right to be heard) and the right to reasoned decisions, form the cornerstone of administrative and employment fairness

¹² Ifeoma Ajunwa, Kate Crawford & Jason Schultz, *Limitless Worker Surveillance*, 105 Cal. L. Rev. 735, 740 (2017)

in India.¹³ However, a black-box algorithm cannot inherently provide reasons for its outputs. Can employees effectively challenge automated decisions if they do not understand how they were evaluated? The inability of algorithms to offer reasoned explanations undermines the very fabric of fair procedure. Therefore, Indian law must urgently consider whether it should recognize a statutory "Right to Explanation" for algorithmic decisions.

Critical Analysis: The inability to contest an algorithmic penalty without knowing its logic fundamentally violates natural justice. Unlike the EU GDPR, India's framework lacks a right to demand human intervention or explanation for automated processing. Indian courts must read a "Right to Explanation" into Article 21's guarantee of fair procedure to rectify this doctrinal void.

4 Automated Dismissal and Procedural Fairness

Algorithmic management frequently leads to automated dismissal often framed as "deactivation" on gig platforms.¹⁴ These terminations are usually triggered by performance scores or algorithmic sanctions that execute automatically when a worker falls below a numerical threshold. This practice circumvents relevant constitutional principles of fair procedure, due process, and the right to judicial review.

Critical Analysis: Terminating an individual's livelihood without human review or the opportunity for a prior hearing breaches established norms of industrial jurisprudence. The law must evolve to prohibit fully automated dismissals, requiring human oversight as a mandatory procedural safeguard before any punitive action is finalized.

5 Accountability Gap

This represents the most severe doctrinal issue in the AI economy. If an AI system commits an unlawful act such as discriminatory hiring or wrongful termination who is legally liable? Is it the immediate employer, the third-party developer, the vendor, the platform, or the software

¹³ I.P. Massey, *Administrative Law* 230-235 (9th ed. 2017)

¹⁴ Jeremias Adams-Prassl, *What if Your Boss Was an Algorithm? Economic Incentives, Legal Challenges, and the Rise of Artificial Intelligence at Work*, 41 Comp. Lab. L. & Pol'y J. 123, 130 (2019)

company?¹⁵ The diffusion of agency in algorithmic systems creates an accountability vacuum. Liability must remain non-delegable. The employer utilizing the AI must bear primary legal responsibility to prevent the outsourcing of legal compliance to tech vendors.

Critical Analysis: The legal vacuum regarding liability allows employers to use AI as a liability shield. Drawing on the tort principle of strict liability, Indian law must adopt a principle of non-delegable accountability for employers. Delegating managerial functions to an algorithm cannot legally equate to delegating legal responsibility.

6 Gig Workers and Platform Labour

The gig economy encompassing food delivery, ride-sharing, freelancing, and app-based services serves as the primary testing ground for algorithmic management.¹⁶ These workers face intense digital exploitation due to their contested employment status. Algorithms dictate their pay, route, and continued employment, creating massive algorithmic dependence while denying them collective bargaining rights and social security. These specific issues are symptoms of a deeper structural mismatch between traditional, bilateral labour law and digitally mediated, AI-driven workplaces.

Critical Analysis: Platform workers are currently misclassified as independent contractors, stripping them of protections while they remain subordinate to an algorithmic manager. The law must pierce the technological veil and recognize economic dependence and algorithmic control as the modern equivalents of legal subordination, thereby granting gig workers full employee status.

V. Comparative Perspective: Lessons from International Frameworks

To address these domestic legal gaps, India must look toward international regulatory frameworks, focusing on legal approaches rather than broad geographical comparisons.

¹⁵ Jeremias Adams-Prassl, *What if Your Boss Was an Algorithm? Economic Incentives, Legal Challenges, and the Rise of Artificial Intelligence at Work*, 41 Comp. Lab. L. & Pol'y J. 123, 130 (2019)

¹⁶ A.V.R. Rao, *The Gig Economy and the Future of Work in India*, 56 Indian J. Indus. Rel. 112 (2020)

The **European Union (EU)** provides the most advanced regulatory template. The European Union AI Act classifies AI used in employment, worker management, and access to self-employment as "High-risk AI systems".¹⁷ Consequently, employers must ensure human oversight, implement risk management systems, and adhere to strict transparency obligations. Furthermore, the EU's General Data Protection Regulation (GDPR) establishes specific rights against being subject to fully automated decision-making.

At the global level, **International Labour Standards (ILO)** established by the International Labour Organization (ILO) emphasize the Decent Work Agenda.¹⁸ The ILO advocates for Ethical AI and worker-centred AI governance, ensuring that technology serves to augment human dignity rather than diminish it.

Briefly examining other jurisdictions, countries like Canada are actively developing Algorithmic Impact Assessment frameworks for public sector AI, while certain jurisdictions in the United States have passed localized laws (such as New York City's mandate for bias audits in automated employment decision tools).¹⁹

The critical question is: Which principles are realistically adaptable to the Indian legal and socio-economic context?

Critical Analysis: While adopting the EU AI Act wholesale may stifle India's burgeoning IT sector, the underlying principles of classifying workplace AI as "high-risk," mandating transparency, and requiring human oversight are entirely compatible with Indian constitutional values. Indian lawmakers must adapt these international mechanisms to build a proportionate, rights-based framework that does not sacrifice worker dignity for technological efficiency.

¹⁷ Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act), COM (2021) 206 final (Apr. 21, 2021)

¹⁸ Int'l Labour Org. [ILO], *Work for a Brighter Future: Global Commission on the Future of Work*, at 43 (2019).

¹⁹ N.Y.C. Admin. Code § 20-870 (2021) (Automated Employment Decision Tools)

VI. Towards a Regulatory Framework for Algorithmic Management in India

Addressing the profound challenges of algorithmic management requires moving beyond critique toward actionable, structural reform. The following proposals outline a comprehensive regulatory framework for India.

First, Parliament must enact a dedicated law governing AI in employment or introduce targeted, substantial amendments to existing labour legislation.²⁰

- ❖ *The Legal Gap*: The current Labour Codes do not recognize algorithms as managerial agents.
- ❖ *The Proposed Solution*: Legislate specific definitions for algorithmic management and automated decision-making.
- ❖ *The Practical Impact*: This brings AI systems within the purview of labour inspectorates and formal legal scrutiny.

Second, the law must mandate human oversight for significant employment decisions, particularly hiring, discipline, and termination.²¹

- ❖ *The Legal Gap*: Automated dismissals currently violate natural justice.
- ❖ *The Proposed Solution*: Require a "human-in-the-loop" before any punitive action is taken.
- ❖ *The Practical Impact*: Ensures that workers can appeal to human empathy and context, restoring due process.

Third, India must establish a statutory right to explanation for automated employment decisions.²²

²⁰ Matthew U. Scherer, *Regulating Artificial Intelligence Systems: Risks, Challenges, Competencies, and Strategies*, 29 Harv. J.L. & Tech. 353, 356 (2016)

²¹ Cynthia Estlund, *What Should We Do After Work? Automation and Employment Law*, 128 Yale L.J. 254, 260 (2018)

²² Andrew D. Selbst & Solon Barocas, *The Intuitive Appeal of Explainable Machines*, 87 Fordham L. Rev. 1085, 1090 (2018)

- ❖ *The Legal Gap:* Black-box algorithms prevent workers from understanding adverse actions.
- ❖ *The Proposed Solution:* Require employers to provide plain-language reasons regarding how an algorithmic decision was reached.
- ❖ *The Practical Impact:* Empowers workers to identify and challenge discriminatory or erroneous inputs.

Fourth, regulators should require algorithmic impact assessments (AIAs) before deploying high-risk workplace AI, alongside periodic independent audits for AI systems used in employment.

- ❖ *The Legal Gap:* AI bias is currently discovered only after irreversible harm has occurred.
- ❖ *The Proposed Solution:* Proactive auditing for proxy discrimination and bias.
- ❖ *The Practical Impact:* Shifts the burden of ensuring fairness from the marginalized worker to the employer deploying the technology.

Fifth, the law must clarify employer responsibility through a principle of non-delegable accountability.²³

- ❖ *The Legal Gap:* Employers currently evade liability by blaming third-party AI vendors.
- ❖ *The Proposed Solution:* Statutorily ensure employers remain legally answerable even when relying on third-party AI systems.
- ❖ *The Practical Impact:* Incentivizes employers to purchase only ethical, compliant AI systems, fostering a responsible market.

Sixth, lawmakers must strengthen protections against excessive workplace surveillance through the principles of purpose limitation and proportionality.²⁴

- ❖ *The Legal Gap:* The DPDP Act's consent mechanisms are ineffective in employment settings.

²³ Margot E. Kaminski, *The Right to Explanation, Explained*, 34 Berkeley Tech. L.J. 189 (2019)

²⁴ A. Michael Froomkin, *The Death of Privacy?*, 52 Stan. L. Rev. 1461, 1470 (2000).

- ❖ *The Proposed Solution:* Outlaw continuous biometric monitoring unless strictly required for safety.
- ❖ *The Practical Impact:* Reclaims worker privacy and dignity under Article 21.²⁵

Finally, the state should create specialized grievance redressal mechanisms for algorithmic employment disputes and develop sector-specific AI governance guidelines through tri-partite collaboration between labour regulators, technology experts, employers, and worker representatives.²⁶

- ❖ *The Legal Gap:* Traditional labour courts lack the technical expertise to audit code.
- ❖ *The Proposed Solution:* Establish expert-assisted tribunals.
- ❖ *The Practical Impact:* Ensures swift, technically competent justice for workers harmed by algorithmic decisions.

Critical Analysis: The success of these reforms hinges on recognizing that technological innovation and robust labour protections are not mutually exclusive. By embedding constitutional values directly into statutory mandates such as non-delegable liability and the right to explanation India can proactively regulate the AI economy rather than merely reacting to its localized harms.

VII. Conclusion

The integration of Artificial Intelligence into the workplace marks a pivotal juncture in the evolution of labour relations. Synthesizing the doctrinal analysis conducted in this paper, several key findings emerge. Primarily, Indian labour legislation remains fundamentally premised on human decision-makers rather than autonomous algorithmic systems. While existing constitutional protections under Articles 14 and 21 provide valuable theoretical safeguards, they are practically insufficient to address the opacity and complexity of AI-driven employment decisions. The current fragmented regulation creates severe uncertainty regarding accountability, transparency, and effective remedies for workers. However, comparative frameworks,

²⁵ Sonia K. Katyal, *Private Accountability in the Age of Artificial Intelligence*, 66 UCLA L. Rev. 54, 60 (2019)

²⁶ Orly Lobel, *The Law of the Platform*, 101 Minn. L. Rev. 87, 95 (2016).

particularly from the EU, demonstrate that technological innovation and robust worker protection can indeed coexist through carefully designed regulatory safeguards.

These findings necessitate critical observations regarding the future of work. AI should be utilized to enhance managerial efficiency, not to dilute legal accountability. The concept of technological neutrality the idea that laws should not target specific technologies does not justify regulatory neutrality when fundamental rights are at stake. Crucially, delegating managerial functions to algorithms cannot legally or morally amount to delegating legal responsibility.

Looking forward, the future implications are clear: algorithmic management is likely to become commonplace across both platform work and conventional, formal employment. While judicial interpretation of constitutional provisions may incrementally fill some gaps, comprehensive legislative intervention will ultimately be necessary to provide legal certainty. India currently possesses a unique opportunity to develop a rights-based AI governance model that effectively balances technological innovation, economic growth, and constitutional commitments.

To achieve this, reform-oriented closing points must guide policymakers. The state must formally recognize algorithmic management as a distinct subject of labour regulation. It is imperative to guarantee transparency and explainability in AI-driven employment decisions while preserving meaningful human oversight over decisions affecting workers' rights and livelihoods. The law must unequivocally clarify employer accountability irrespective of AI deployment, and immediately strengthen protections for gig and platform workers who currently suffer the brunt of algorithmically managed workplaces. Ultimately, future AI regulation must be explicitly aligned with the enduring constitutional values of equality, dignity, privacy, and procedural fairness.

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