ALGORITHMIC MANAGEMENT IN GIG WORKERS: EXAMINING THE RISKS TO WORKERS' RIGHTS AND ACCOUNTABILITY MECHANISMS

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ABSTRACT

The redefining wave of digitalization has ushered in a new regulatory control over algorithm management in labour administration. This system operates various managerial duties, including delegation of work, logistics, monitoring productivity, performance tracking, enforcement of regulations, and customer feedback, all without any human intervention.

However, this shift in the execution of algorithm management has severe ramifications for labour's rights, regulatory compliance, and accountability mechanisms. The key issue is the termination of digital platform workers on the basis of algorithm management. These evaluations frequently embed discriminatory biases and are opaque, with no adequate remedy for affected individuals.

The traditional laws struggle to keep pace with AI-driven management. The platform continuously monitors gig workers, who are unaware of the extent or purpose of the data collected about them. These developments raise significant threats to the violation of various fundamental rights, such as the right to collective bargaining, the right to privacy, the right to equality, the right to livelihood, and human dignity.

Additionally, the key issue is determining the accountability in cases of algorithmic discrimination, misuse of data, or unjust termination. Although the enactment of the Code of Social Security 2020 takes a step forward to define gig workers and platform-based workers, a significant gap remains, particularly for the protection of workers' rights such as collective bargaining, job security, fixed working hours, etc. Moreover, currently there is no law that can directly regulate artificial intelligence in the workplace.

This paper critically analyses the inadequacies of the current legal framework to protect the workers' rights in the digital world. It highlights the urgent requirement of comprehensive legal reform to safeguard the rights of workers and determine the liability for algorithm-driven harms. This paper

also suggests ways to make corporations responsible for the harm caused by algorithm management in the digital workplace.

Keywords: Algorithmic management, gig workers, risk to workers' rights, Accountability mechanism.

METHODOLOGY

The study uses a doctrinal research methodology; the research will provide an overall examination of the effects of algorithmic management on the rights of workers in digital platforms. The doctrinal part of the study will focus on the structure and type of constitutional provisions, existing judicial precedents, and legislative measures relating to workers' rights in addition to the regulation of digital platforms. This part will examine the extent of basic fundamental rights secured by Article 21 of the Constitution, the labor-based welfare legislation, and also the new emerging regulatory framework relating to digital platforms and other types of gig-based work.

It will also utilize secondary sources (i.e., scholarly literature, policy reports, and case laws) to provide an analysis of issues surrounding accountability, transparency, and violation of the rights of workers.

Utilizing this method in this way allows researchers to connect theory to practice. It will allow for a greater understanding of how algorithms function and the potential impact they can have on workers' rights. The doctrinal study will result in an objective assessment of the issues that digital platforms confront, as well as the type of regulation required to address those challenges.

LITERATURE REVIEW

Application of artificial intelligence for management is increasing rapidly in various sectors. Employment in the gig economy is presumed to increase thrice a year. NITI Aayog. (2022)[1] However, it fails to protect the collective bargaining rights, minimum wages, job security, and breach of their privacy Luyt, D. (2023, June 22)[2]. Traditional laws fail to protect the rights of labourers in the gig economy, and the Code of Social Security 2020 has defined the gig economy and platform-based workers, but it is still not enforced. One of the most difficult tasks

[1]NITI Aayog, *India's Booming Gig and Platform Economy: Perspectives and Recommendations on the Future of Work* (June 2022).

[2] Algorithmic Management in the Gig Economy, Michalsons, https://www.michalsons.com/blog/algorithmic-management-in-the-gig-economy/66513 (last visited Mar. 25, 2026).

is to ascertain a liability for any infringement of rights because the task is performed by artificial intelligence. Gupta, B. (2023)[3] Mohammad Sajjad Hussain's[4] study provides a focused empirical account of algorithmic management in Indian food-delivery platforms. It shows how automated systems control task allocation, remuneration, and performance assessment through opaque metrics and rating mechanisms. These practices create significant power asymmetries, leaving workers economically dependent on platforms while denying transparency and procedural fairness. In light of these literature vacuums, it highlights that there is an urgent need for a law that can ascertain the liability and protect the rights of workers for tasks performed by artificial intelligence.

INTRODUCTION

In the past few decades, data-driven technologies have transformed the world around us, particularly the workplace. While the precise scope and nature of how recent technological advancements, such as AI, will change the world of work remain uncertain, employers are increasingly using data and algorithms in ways that may potentially have consequences for workers' fundamental rights and interests.

Navigating the quickly changing labour market requires understanding both possibilities and difficulties, as well as making informed decisions. Although many people are interested in digital professions, there are misconceptions about the hurdles, earning potential, and skills needed. Gig employment offers flexibility, but the amount of labour and pay varies. Unlike traditional employees, gig workers are often self-employed or independent contractors who manage their own clients, projects, and revenue without a fixed wage or long-term employment contract. Furthermore, platforms employ algorithms to impact task assignment, pricing, and worker performance tracking via often-undisclosed methods, making it critical for workers to grasp the regulations and challenges before entering the gig economy[5].

The debate about the future of work, which has become almost universal in legislation, policy-making, and the media, has up until now focused on "quantitative" aspects, for example how

[3] LEAD at Krea Univ. & Indian Statistical Inst., *Digital Platforms and Labour Laws in India: Status & Rights of Women Workers* (2024), https://digitalplatformsandwomen.ifmrlead.org/wp-content/uploads/2024/02/DP-WEE_Digital-Platforms-and-Labour-Laws-in-India.pdf (last visited Mar. 23, 2026).
[4] Mohammad Sajjad Hussain, Algorithmic Management of Workers Through Food Delivery Platforms in India, 8 *J. Ethics & Affects* 74 (2024).
[5] Int'l Lab. Org., *The Algorithmic Management of Work and Its Implications* (2022), ISBN 9789220421789, https://doi.org/10.54394/NMBW0887.

many jobs might be replaced by automation and the introduction of new technologies like artificial intelligence.[6]

However, the general public conversation ignores a number of important challenges for workers. First, it often disregards the possible role of labour and employment regulations in managing automation procedures and their repercussions. Even though collective dismissal legislation, even in the case of technological developments in firms, has long been a fixture of employment regulation in various nations, there is no substantive discussion of this legislation in the most quoted writings regarding the future of work[7].

In India, where the gig economy employs millions of workers, algorithmic management operates in a largely unregulated legal environment. Although recent legislative initiatives such as the Code on Social Security, 2020 recognize gig and platform workers, substantive protections against algorithmic exploitation remain inadequate.[8] This paper argues that unchecked algorithmic management poses systemic risks to workers' rights and necessitates robust accountability mechanisms grounded in legal principles of transparency, fairness, and due process.

CONCEPT OF ALGORITHMIC MANAGEMENT

The term 'algorithmic management' was introduced by Min Kyung Lee, Daniel Kusbit, Evan Metsky, and Laura Dabbish[9]. They used this term to explain the delegation feature of algorithms, where they have the capacity to perform managerial tasks such as allocation and improve and monitor workers. This term was first used to talk about how digital platforms use algorithms to assign jobs, hire more gig workers, and track their work.[10]

Furthermore, 'algorithm management' is defined as the application of a computer-based program where processes assist and partly fulfil the management of workers for planning, executing, monitoring, and coordination.[11]

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[6] Cynthia Estlund, *Automation Anxiety: Why and How to Save Work* (Oxford Univ. Press 2022)
[7] Valerio De Stefano & Simon Taes, Algorithmic Management and Collective Bargaining, 29 *Transfer: Eur. Rev. Lab. & Rsch.* 21 (2023).
[8] Code on Social Security, 2020, §§ 2(35), 114 (India).
[9] Min Kyung Lee et al., Working with Machines: The Impact of Algorithmic and Data-Driven Management on Human Workers, in *Proc. 33rd Ann. ACM Conf. Hum. Factors Computing Sys.* 1603 (2015).
[10] Id.
[11] Stefano Baiocco et al., *The Algorithmic Management of Work and Its Implications* (Int'l Lab. Org. 2022),

It can be said that 'algorithmic management' denotes the use of software algorithms in the workplace to monitor, inspect, and regulate procedures. Workers such as freelancers perform tasks on digital platforms, but they are not formally employed by companies. It indicates that algorithmic management is an automatic execution of algorithm-based decisions, regular tracking, and analysis of the behaviour and performance of workers. In reality, workers interconnect with machines and not with humans. In many instances it is found that these systems are biased, but workers are not aware of the circumstances that are regulated by algorithms and not by humans.[12]

There are some features of algorithmic management, which are as follows -

Firstly, it is continuously tracking the behaviour of workers, and it primarily depends upon the availability of accurate and reliable data for its effectiveness; otherwise, these algorithms are purposeless without the data system that enables their operation.[13]

Secondly, workers' deals with the 'system' instead of an individual. It makes a clear distinction from traditional technology-based assistance, where human interaction used to play a prominent role.

Thirdly, decisions are carried out automatically with minimal or no human involvement, and algorithms determine and enforce results independently.

Lastly, it refers to the continuous assessment of workers' performance through data-based tracking. It may involve the automatic comparison of workers' behaviours and continuously reporting the unusual behaviours and irregularities to control centres for further human examination.[14]

CONCEPT OF GIG WORKERS'

The term 'gig' is associated with a musical performance from individuals for a short duration where an individual does not have a guarantee to perform continuously. It is a condition where

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https://www.ilo.org (last visited Mar. 20, 2026).

[12] Mareike Möhlmann & Lior Zalmanson, Hands on the Wheel: Navigating Algorithmic Management and Uber Drivers' Autonomy, in *Int'l Conf. Info. Sys.* (2017).

[13] Tarleton Gillespie, The Relevance of Algorithms, in *Media Technologies* (MIT Press 2014).

[14] H.K. Hansen & M. Flyverbom, The Politics of Transparency, 22 *Org.* 872 (2015).

some days they are getting regular work and some days they might not get it.

Some of the features of gig workers are as follows[15]: -

a. The work offered to them is temporary and irregular.

b. There are fewer chances of job security and work during flexible hours.

c. The payment of work is based on piece rate.

d. There is minimal opportunity for any career growth.

Section 2(35) [16] defines a gig worker as an individual who is earning from activities performed beyond the limits of a traditional employer and employee relationship.

Further the section 2(e) [17]defines a gig worker as an individual who earns from outside the traditional employer and employee relationship environment; the individual performs tasks on the basis of contractual terms, and it provides payment as the rate is mentioned in the contract, and it also includes payment on a piecework basis.

This paper primarily examines workers engaged in location-specific jobs, such as grocery shopping and food delivery, and taxi flagging.

RISKS TO WORKERS' RIGHTS

This part will explore how algorithmic management is affecting the rights of workers through its task distribution facilities, performance analysis, and termination. The study examines how the algorithm management is based on potential discrimination and non-transparency in decision-making, which ultimately curtails the rights of workers.

A. Right to Fair Wages and Income Security

In the case of 'Olga Tellis v. Bombay Municipal Corpn[18].,' held that right to livelihood is part of Article 21 of the Constitution in the following terms- "[…] *An equally important facet of that right is the right to livelihood because, no person can live without the means of living, that*

[15] Jamie Woodcock & Mark Graham, *The Gig Economy: A Critical Introduction* (Polity 2020).
[16] Code on Social Security, 2020 (India).
[17] Rajasthan Platform-Based Gig Workers (Registration and Welfare) Act, 2023 (India).
[18] *Olga Tellis v. Bombay Mun. Corp.*, (1985) 3 S.C.C. 545 (India).

is, the means of livelihood. If the right to livelihood is not treated as a part of the constitutional right to life, the easiest way of depriving a person of his right to life would be to deprive him of his means of livelihood to the point of abrogation. Such deprivation would not only denude the life of its effective content and meaningfulness but it would make life impossible to live". This highlights that Article 21 of the constitution guarantees the right to livelihood, but there is potential infringement of gig workers' rights.

Algorithmic wage discrimination

According to the study, it is identified that Uber's revised pricing system amounts to 'algorithmic gamblification.' It is a system where drivers are continuously placed into the gambling environment for uncertain fair wages, without clarity, negotiation, and authority to ascertain how fare is determined. One of the drivers stated that Uber supervisors must disclose and clarify to their delivery partners how the pay structure is determined and what share of the fare the company is retaining. It further warns that failure to warn of such dynamic pay could spread widespread instability and AI-driven insecurity in earnings.

Furthermore, dynamic pricing and payment models place more pressure on drivers and overcharge customers, allowing more earnings to be shared with Uber while drivers receive minimum earnings despite the overall profit for Uber.[19]"

In case of *McClean v. State of Arkansas* and *Knoxville Iron Company v. Samuel Harbison*[20]*,* The court emphasized that wages must be determined in a fair and transparent process. If an industrial employee payment method is based on the quantity of coal mined, then the employer cannot introduce an opaque mechanism for determining the wage calculation, such as screening the coal before weighing. This case highlights that if a worker is employed on piece rate work, then on the day of payment, no unfair rule can be used to determine the wages. It indicates that digital platforms must disclose and explain to the workers the process of determining any fare charges.

Algorithmic wage discrimination indicates a significant shift from the standard of fairness. Even if the issue relating to failure to provide minimum wages is kept aside, the algorithmic

[19] New Research Exposes Exploitation of Uber Drivers, Worker Info Exchange, https://workerinfoexchange.nl (last visited Mar. 21, 2026).
[20] *Knoxville Iron Co. v. Harbison*, 183 U.S. 13 (1901).

management for determining wages is unjust. The reason is its non-transparent and uncertain mechanism where workers cannot understand the method of calculating the fare of workers' work, and in addition to that, the system calculates different wages for each individual working at the same time for the same work.[21]

Recently, Petitioner Telangana Gig and Platform Workers Union has filed a petition before the Telangana High Court for challenging the failure of the state to control the taxi fares under the Motor Vehicles Act, 1988. The petitioner argued that unregulated surge price practices by app-based taxi pricing are exploitative and arbitrary, which disproportionately affects both the consumer and the driver.

The petitioner further argued that instead of legitimizing surge prices, it adversely harms both drivers and passengers, as drivers receive a small share of higher prices, but passengers deal with uncertain bills. They also submit that when there is an increase of two or three times in fare, often passengers blame the driver for such fare, but in reality, both the driver and passenger suffer from it, and app-based applications make a profit from it. To address these, there is a need for equal and fair regulation in India and to prohibit unauthorized transportation to uphold the security and safety of drivers and passengers. [22]

Additionally, the Central Consumer Protection Authority (CCPA) has issued notices to cab aggregators Uber and Ola over allegations of allegedly charging customers in India different rates based on their mobile phones' operating systems. This action was taken after reports revealed that there is a disparity in fares displayed simultaneously on Android devices and iPhones for identical rides, leading consumer affairs minister Pralhad Joshi to term the issue a prima facie unfair trade practice and order an investigation by the CCPA. He had also asked his department to examine whether similar pricing practices exist in food delivery and ticket booking platforms. This highlights the algorithmic discrimination, which can exploit both workers and consumers.[23]

Minimum wages

In addition to that, there is difficulty earning minimum wage, which is required by an individual

[21] The Algorithmic Gamblification of Work, LPE Project, https://lpeproject.org (last visited Mar. 24, 2026).
[22] Gig Workers Union Petition Telangana HC, Medianama, https://www.medianama.com (last visited Mar. 24, 2026).
[23] Govt Notice to Ola & Uber Over Differential Pricing, Times of India, https://timesofindia.indiatimes.com (last visited Mar. 21, 2026).

to fulfil the basic requirement. This is evident from this instance where a worker highlighted that the Swiggy company earlier used to make a payment of Rs 40 per order for a location within a 4 km radius. We did not rebut when it was reduced and brought to Rs 35, but again, the company has further declined to Rs 15. He further expressed the concern that such a reduction makes it difficult to support their family because, as per the new regulation, he will receive only Rs 300 even after making 20 deliveries in a day.[24]

According to an estimate, the average pay of cab drivers is `22,000–`25,000.[25] A key factor for the decline in pay is the reduction in incentives by Uber and other corporations.[26] Any attempt by the legislature to fix the wage ceiling under the ESI system for drivers may simply be avoided by the corporation, given Uber's influence over the average wages of its cab drivers. If the pay ceiling is set at a sufficiently low level, it may incentivize Uber to retain the incentives at such a low level that, despite no major increase in incentives, a significant percentage of its drivers stay beyond the scope of ESIC. Thus, the pay ceiling must be determined at a high enough level to make it more expensive for the employer to violate its obligations under such an ESI plan, as and when it is implemented.[27]

He stated that there are two delivery peaks in a day: around lunch and dinner times, and they would receive rewards for working through either of those peaks. He said "*We used to get some time to rest in between. Now that the incentive has been taken away from us, we have to work for a minimum of 12 hours a day to earn such incentives,"*. He stated that the monthly and weekly incentives, long-distance delivery incentives, and services during rainy seasons have all been decreased.[28]

B. Procedural Fairness, Due Process, and Natural Justice

Procedural justice provides a useful normative framework for assessing the legitimacy of algorithmic deactivation in platform-based work. At its core, procedural justice emphasises the fairness of decision-making processes rather than solely their outcomes. Key elements include transparency, reason-giving, consistency, the opportunity to be heard, and access to impartial

[24] Delivery Partners Strike, New Indian Express, https://www.newindianexpress.com (last visited Mar. 24, 2026).
[25]Soumya Chatterjee, "No Easy Exit as Ola and Uber Drivers Face Debt Trap", *The News Minute* (May 28, 2019).
[26] Id.
[27] Shantanu Braj Choubey, The Uber Conundrum, 17 *Nat'l L. Sch. J.* (2024).
[28] Delivery Partners Strike, supra note 24.

review. These principles have long underpinned labour law protections against arbitrary dismissal and disciplinary action[29].

A fundamental, constitutional guarantee that all legal proceedings will be fair and that one will be given notice of the proceedings and an opportunity to be heard before the government acts to take away one's life, liberty, or property. It is also, a constitutional guarantee that law shall not be unreasonable, arbitrary, or capricious[30].

In the groundbreaking case *Lagos del Campo v Peru*, the IACHR relying on the General Comment and other sources, recognizes a right to 'labor stability,' which includes due process that ensures termination should be reasonable. They must state the reason and allow the worker an opportunity to challenge such a decision internally.[31] The decision derives its basis from Article 26 of the ACHR, requiring the state to take steps for full recognition of economic, social, cultural, and scientific standards set out in the amended Charter of the Organization of American States.[32] The right to work under Article 15 of the African Charter on Human and People's Rights also includes, as a minimum core obligation, providing adequate protection against unfair or unjustified arbitrary and constructive dismissal. [33] The decision of the African Commission on Human and People's Rights in Zimbabwe was that there was a violation of Article 15 in a similar situation where workers are deprived of employment due to the closure of a newspaper that employed them due to new media legislation[34].

Lack of fairness

In the platform-based work environment, algorithmic deactivation frequently fails to meet these standards, as decisions are taken commonly without any prior notice, without any clear justification, and without any effective opportunity to be heard and contest the decision. The lack of procedural safeguards compromises the legitimacy of algorithmic authority and weakens trust in platform governance. Where workers are excluded from economic participation through opaque automated decisions, the absence of procedural safeguards

[29] *Lagos del Campo v. Peru*, Judgment of August 31, 2017, Series C No. 340.
[30] Chhavi Agarwal, Due Process of Law and Natural Justice, https://www.manupatra.com (last visited Mar. 24, 2026).
[31] *Lagos del Campo v. Peru*, Judgment of August 31, 2017, Series C No. 340.
[32] Charter of the Organization of American States (1970).
[33] African Comm'n on Human & Peoples' Rights, Principles on ESCR (2010).
[34] James Atkinson & Nicholas Sedacca, Realising Decent Work for Platform Workers, 16 *Transnat'l Legal Theory* 578 (2025).

converts efficiency-oriented management into a form of unchecked power.[35].

For decades consumer feedback has played an important role in human resource management and has been used as an evaluative and disciplinary tool for workers[36] Within the gig economy, consumer feedback mechanisms often appear as worker 'rating' systems. Poor ratings – which are posted publicly – can destroy a worker's online credibility, negatively impact their future job prospects, or result in apps removing workers from the platform altogether[37]

Lack of transparency and control

The lack of transparency in algorithmic systems, coupled with corporate trade secrecy laws, deepens the existing disparities between employers and workers[38]. Many workers have limited knowledge of what data is collected and how it can be further used or even the presence or existence of surveillance tools[39]. In the absence of adequate transparency, workers cannot effectively address the exercise of rights to explanation, challenge, or redress available in the jurisdiction. Moreover, a third party manages these systems, leaving employers themselves unable to adequately explain or scrutinize algorithmic decisions[40]. This highlights how non transparent processes further increase dominance and control.

Ratings constitute an important tool for evaluating workers' performance and exerting control over labor. It incorporates various indicators or metrics, which vary across platforms, including in sectors like taxi or freelance work. However, there is minimal transparency about how these ratings are calculated and how different indicators are weighted within algorithmic assessment. It limits the portability of ratings across the platforms and enables platforms to exclusively exercise their control over workers by locking them into their systems. the significant terms of time and financial investment needed to establish profiles and ratings. These platforms discourage workers from engaging in multiple platforms. It is evident in platforms like freelance and microtask platforms, where workers are required to rebuild their reputations from scratch on each platform[41].

[35] Jennifer Mate, Algorithmic Deactivation and Due Process (2026).
[36] Lon Fuller & V. Smith, Consumers' Reports, 5 *Work Emp. & Soc'y* 1 (1991).
[37] Valerio De Stefano, Just-in-Time Workforce, 37 *Comp. Lab. L.J.* 471 (2015).
[38] Alex Rosenblat & Luke Stark, Uber's Drivers, SSRN (2015).
[39] Jeremias Adams-Prassl et al., Regulating Algorithmic Management: A Blueprint, 14 *Eur. Lab. L.J.* 124 (2023).
[40] Jamie Susskind, *The Digital Republic* 219 (Bloomsbury 2022).
[41] Hannah Johnston & Chris Land-Kazlauskas, *Organizing On-Demand Work* (Int'l Lab. Org. 2018).

Delivery platforms assess workers on their participation criteria, including engagement during peak periods of deliveries, number of deliveries completed, delivery speed, and cancellation rates. These indicators influence the feedback they receive from customers and business partners like restaurants, grocery shops, etc., which in turn determines workers' ratings. However, limited ability to cancel orders can lead to working for longer hours, extending the average to 59 hours in developing nations.[42]

Additionally, Devina Mehra, founder of wealth management company First Global, publicly address about unfair systems for gig workers in quick commerce. "…*people choose to work within unfair systems because the choice is between being unemployed and this; not between being employed in a fair system and this*.[43]"

The automation of significant decisions, including termination, undermines the human accountability within employment relationships. In one example, an e-commerce company firm stated that a local manager lacked knowledge and control over algorithms, which dismissed a worker allegedly linked to union activities. This decline in human agency leaves workers without adequate recourse because the decision was given by an opaque algorithm, which has limited sympathy. Thus, this makes legislative efforts to ensure humans are in the loop, recognizing that the algorithm lacks human judgment, which is necessary for fair employment practice. [44]

Grievance redressal mechanism

In several platforms, appeal mechanisms are either unavailable or merely symbolic. Reviews are often automated, delayed, or carried out without any proper reassessment of evidence, which weakens the right to be heard and renders procedural safeguards to mere formalities rather than meaningful protection.[45]

Additionally, Aggregator companies often claim to provide a comprehensive grievance redressal mechanism for its customers and partners, but on-the-ground reality appears to be unsatisfactory. The grievance redressal process is primarily automated, with call center personnel relying on scripted replies that tend to disregard or fail to adequately address the

[42] Int'l Lab. Org., *World Employment Outlook* (2021), https://www.ilo.org (last visited Mar. 24, 2026)
[43] 10-Minute Delivery Debate, *Forbes India*, https://www.forbesindia.com (last visited Mar. 24, 2026).
[44] H. Abraha, *Workers' Data Rights in the Digital Age* (Int'l Lab. Org., Working Paper No. 149, 2025).
[45] *Indian Fed'n of App-Based Transp. Workers v. Union of India*, W.P.(C) No. 1068/2021 (India).

drivers' concerns[46].

Furthermore, the aggregator companies do not assume any responsibility for driver partners in the cases of accidents or adverse incidents during the course of work. Instances of harassment lead to an increasing case of suicide. There is an absence of points of contacts regarding occupational health and safety or working conditions and an absence of a grievance, complaint, or appeal mechanism[47].

Thus, the right to challenge algorithmic deactivation must ensure access to prompt, informed, and impartial human reviews. Workers must be provided with information to comprehend the grounds of decisions, submit evidence, and receive reasoned orders. In the absence of these procedural safeguards, algorithmic deactivation excludes without accountability[48].

C. Privacy, Surveillance, and Human Dignity

The right to privacy is essential for gig workers, and algorithmic management relies on large data collection, including real-time location tracking, behavioural analysis, and performance evaluation. This creates threats of curtailing the right to privacy.

The ordinary meaning of privacy is "*the of being alone, or the right to keep one's personal matters and relationship secret"*[49]. In present time, privacy is not limited to physical sphere but also include virtual world. Article 12[50] of the Universal Declaration of Human Rights, ensures that, "*No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks"*.

Digital surveillance is the use of advanced technology to monitor, intercept, analyse, and store electronic communications. The tools employed include bulk data mining of online activity, tracking physical location via GPS, etc.

In the case of *Justice K.S. Puttaswamy (Retd.) v. Union of India*[51] court held that Consent is an

[46] Id.
[47] *Ibid*
[48] Mate, supra note 35.
[49] Privacy, *Cambridge Dictionary*, https://dictionary.cambridge.org (last visited Mar. 24, 2026).
[50] Universal Declaration of Human Rights, G.A. Res. 217 (III) A (Dec. 10, 1948).
[51] *Justice K.S. Puttaswamy v. Union of India*, (2017) 10 S.C.C. 1 (India).

integral to the individual's "zone of privacy". In the context of digital data, it is the determination in which data is significant and the attribution of the individuals who are authorized to process it. To check for the existence of an actionable claim to privacy, it needs to be considered if such a right to choose and specify exists.[52].

Justice Puttaswamy (Retd) v Union of India and Ors,[53] the Supreme Court established the right to privacy as a fundamental right, a crucial part of Article 21 of the Constitution of India.

Supreme court held in the case of Ireo Grace Realtech (P) Ltd. v. Abhishek Khanna [54] that one-sided contracts with improper clauses established in Favour of one party and affecting the other party cannot bind the weaker party.

In the European Union, the General Data Protection Regulation has established a standard for data protection legislation, allowing people more control over their personal data and placing greater duty on companies to secure this information.

Furthermore, the California Consumer Privacy Act[55] mandates that firms disclose their data access procedures and give individuals the choice to opt out of illegal access to their personal information and the use of sensitive personal data and cross-context behavioural advertising.

The Personal Information Protection and Electronic Documents Act[56] Canada applies throughout the state to those who work in businesses related to commercial activity, and India's Digital Personal Data Protection Act 2023, comprehensive data protection legislation, aims to regulate the processing of personal data by businesses and promote individual rights.

Surveillance Through Selfies

Swiggy consistently issued SMS reminders to delivery personnel to ensure that they adhered to uniform policies, including the requirement to wear a uniform. t-shirts and carry bags. Non-compliance with the dress code attracts a fine. Prior to the introduction of real-time selfie identification, fleet managers conducted ground inspections at delivery sites or locations to monitor the compliance of guidelines. The obligation to take a selfie for monitoring uniform

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52 Id.
53 Id.
54 *Ireo Grace Realtech v. Abhishek Khanna, A.I.R. 2021 S.C. 437 (India).*
55 California Consumer Privacy Act of 2018, Cal. Civ. Code §§ 1798.100–1798.199.
56 Personal Information Protection and Electronic Documents Act, S.C. 2000, c. 5 (Can.).

compliance has been a standard practice among delivery personnel since the advent of real-time facial identification. Unlike social media selfies, where an individual posts voluntarily, workers do not have control, and they have to upload in real time without any alteration[57], and this raises a significant risk that lack of control over the image captured indicates that these selfies are beyond compliance checks and that they amount to a form of surveillance because workers are in continuous control through a real-time face identification mechanism.

Audio as a Tool of Surveillance

The use of audio as a tool of surveillance where workers are monitored through tracking calls, real-time listening systems, or voice recordings. These practices are used to improve customer satisfaction, monitoring, and adherence to standards of digital platforms. It raises a significant risk relating to privacy. For example, Swiggy regulates the users' interaction and ability to control and activate or restrict the communication. Recording all conversations among delivery workers, restaurants, and customers is similar to call centres.[58]

Automatic Speech Recognition (ASR) allows the automatic transcription and examination of large volumes of calls, facilitating the possibility to monitor and assess workers on a large scale. This technology can identify behaviour patterns, analyse emotional tones, and detect compliance without any requirement of human intervention.[59]

Surveillance Through location

Geofencing technology involves the creation of virtual boundaries around specific geographical locations by defining a parameter such as latitude, longitude, and radius. Delivery platforms employ this geo-fencing to verify whether delivery workers are accurately present at specified designated locations.[60] By placing an invisible geo-fence around a restaurant within a few meters' radius, the platform ensures that the 'reached restaurant' status is only activated when the delivery worker is within this area. If the worker is outside the geofence area, the application does not validate the status as 'reached.'

The app records workers' login and logout timings, working hours, and attendance during peak

[57] Hussain, supra note 4.
[58] Jamie Woodcock, *Working the Phones* (Pluto Press, 2016).
[59] Speech Recognition Pipeline, Swiggy, https://bytes.swiggy.com (last visited Mar. 24, 2026).
[60] Mallik et al., COVID-19 Monitoring App, 5 *Transactions Indian Nat'l Acad. Eng'g* 163 (2020)

periods. It automatically adds an incentive once the prescriptions are fulfilled. However, it overlooks the duration where workers idly spend long hours to wait for an order and does not compensate for unpaid distance that delivery workers daily cover. Especially delivery agents moving from delivery points to restaurants. Data collected by platforms is utilized to generate analysis and performance measures of delivery workers. It is accessible to the manager for further evaluation purposes. This information also enables customers to track their order at any or each stage, from order confirmation and preparation to allocation, pickup, and delivery. In addition to that, it assists management to track the workflow and operational status. Moreover, access to a large scale of data from numerous transactions provides general detailed insight into production, consumption, and delivery patterns, including time- and location-based top-selling demand of products. Overall, it shows that these practices form a location-based surveillance governing workers' movements and performance.

The Swiggy workers' app is designed in a manner that enables the workers to remotely generate the work without the presence of direct management or intervention. Data collection is integrated into the workflow through application. It allows workers to automatically and unconsciously contribute or feed data into the platform. This enables digital platforms to collect detailed, real-time information from the remote locations. Algorithmic management further enhances this data by processing large amounts of data beyond human cognitive limitations.[61]

Specified consent

According to Article 6 of GDPR[62], lawful bases for processing data are as follows-

1. The consent to process his personal data must be given for a specific purpose.

2. When access to data is necessary for the performance of a contract, then it must be first disclosed before entering the contract.

3. Data controller must disclose the necessity and the lawful obligation for processing data.

4. Processing of data is necessary for individual's interest or any natural person.

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[61] Mohammad Hossein Jarrahi et al., Algorithmic Management in a Work Context, 8 *Big Data & Soc'y* (2021).
[62] Regulation (EU) 2016/679, art. 6, 2016 O.J. (L 119) 1.

5. An institution may process the data of an individual when they are performing the task for public interest or exercising power that is granted to them by law.

6. An institution may process data for legitimate purposes, and it includes business, but it must be balanced with fundamental rights.

In addition to it,Article 7(2) of GDPR[63] states that when consent includes other matters, while the written declaration is all other matters must be stated separately in simple and plain language. Article 7(3) of GDPR[64] states that an individual has the right to withdraw his consent at any time, and withdrawal of consent must be in an easy form.

In contrast, Swiggy policy in India[65] equates the consent to use of the platform with the data access of individuals. The consent is not specific because the terminology used in the policy is overbroad, such as improvement of its platform and internal operations. It can access the last URL visited before the website URL, which does not indicate any objective for any public interest. Furthermore, they can collect information concerning the online and offline status of other mobile applications. The platform takes one consent for all other matters instead of taking separate consent from an individual.

A data controller shall give individuals choices (opt-in/opt out) with regard to providing their personal information, and take individual consent only after providing notice of its information practices[66]

In contrast, Swiggy's policy in India for its delivery agents is that the right to withdraw is available, but it is not an easy process, and it takes 5 days to delete the account.[67]

Personal data collected and processed by data controllers should be adequate and relevant to the purposes for which it is processed. A data controller shall collect, process, disclose, make available, or otherwise use personal information only for the purposes as stated in the notice after taking consent of individuals. If there is a change of purpose, this must be notified to the individual. After personal information has been used in accordance with the identified purpose

[63] Id. art. 7(2).
[64] Id. art. 7(3).
[65] Privacy Policy, Swiggy Ltd., https://www.swiggy.com/privacy-policy (last visited Mar. 24, 2026).
[66] *Puttaswamy*, supra note 51.
[67]Swiggy Ltd., supra note 65.

it should be destroyed as per the identified procedures[68].

D. Freedom of Association and Collective Action

The International Labour organisation defines that collective bargaining as a voluntary process aimed at determining the terms and condition of work and managing relationship between employer, worker, and their organisation, ultimately resulting to collective association.[69] Collective Bargaining, serves as a tool by workers to negotiate working terms and conditions of employment and to govern relationship between employer, workers and their organisation.

In the context of workers' rights, digital technology plays a crucial role to exercise the right of peaceful assembly and association[70].Technology serve as tool for both to facilitate these rights in physical settings and to create virtual spaces where these rights can be directly practised. In all together it shows the importance to secure collective bargaining rights for platform workers[71].

Article 20 [72] of UDHR and Article 21 and 22 of ICCPR[73] protect the right to peaceful assembly and association. The Human Rights Council has affirmed that States must respect and protected these rights in both online and offline sphere[74]. The General Assembly has further reiterated that state must ensure equal protection of freedoms such as expression, assembly, and association in accordance with human rights digital spaces also. This highlights that gig workers right of collective bargaining must protected in virtual environments.

Although collective bargaining serves as a key mechanism for platform workers to safeguard against deterioration of fair employment standards and decent work in the digital platform. In this context, attention must be given to agency-building initiatives of gig and platform workers to demonstrate how they are striving to pursue these aims.

But workers' initiatives to unionize and engage in collective bargaining have been opposed by certain labor platforms. For example, in addition to challenging "collective bargaining" in Seattle, Uber has also indicated that collective bargaining conflicts with its business model or

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68 Id.
69 Int'l Lab. Org., Q&As on Business and Collective Bargaining (2012)
70 UN Human Rights Council, A/HRC/20/27.
71 UN Human Rights Council, A/HRC/29/25/Add.1.
72 Universal Declaration of Human Rights, supra note 50, art. 20.
73 International Covenant on Civil and Political Rights arts. 21–22, Dec. 16, 1966.
74 Human Rights Council Res. 38/7.

the flexibility it promotes. During a Facebook Live session, when questioned about recognizing the workers' right to unionize and collectively bargain, Amit Singh [75], Uber's Global Lead, Future of Work Policy, responded—

The actual model that we operate and the way in which we have this flexible model means that there are certain ways in which you can protect yourself, that you typically wouldn't need certain ways in which you would ordinarily protect yourself in other things. That is the reason why they don't necessarily exist. So, things like collective bargaining and other things, because of the flexible nature of our work, because you can come on and off the platform, the purpose that collective bargaining was originally structured for doesn't necessarily hold. Thus, this resistance underscores the necessity to establish and protect collective rights in the gig economy.

E. Right to Social Security

Article 25(2) of Universal Declaration of Human Rights, 1948 assures that "*everyone has the right to a standard of living adequate for the health and well-being of himself and of his family … including medical care, sickness, disability".*

Article 7(b) of the International Convention on Economic, Social and Cultural Rights, 1966 recognises "*the right of everyone to the enjoyment of just and favourable conditions of work which ensure, in particular, safe and healthy working conditions"*.

The social security of the workers is a fundamental right under Article 21 of the Constitution. Right to livelihood, decent and humane work condition; occupational safety and health standards constitute part of the social security.

In the case of Consumer Education & Research Centre v. Union of India' [76]held that *"[The] right to health and medical care to protect [one's] health and vigour while in service or post-retirement is a fundamental right of a worker under Article 21, read with Articles 39(e), 41, 43, 48-A and all related articles and fundamental human rights to make the life of the workman meaningful and purposeful with dignity of person."*

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[75] Hannah Johnston & Chris Land-Kazlauskas, *Organizing On-Demand: Representation, Voice, and Collective Bargaining in the Gig Economy* (Int'l Lab. Org. 2018)

[76] *Consumer Educ. & Research Ctr. v. Union of India*, (1995) 3 S.C.C. 42 (India).

Furthermore, in the case of Gujarat Mazdoor Sabha v. State of Gujarat[77]', held *"A worker's right to life cannot be deemed contingent on the mercy of their employer or the State"*.

App-based workers are paid less than subsistence rates and receive no assistance from the state or aggregator firms. App-based workers are not eligible for benefits such as disability benefits, accident insurance, medical benefits, maternity benefits, provident fund schemes, or pension plans. App workers are treated unequally and unfairly in comparison to other unorganized workers.

Additionally, riders claim that even without visible timers, algorithmic work allocation, consumer expectations, and the fear of order throttling generate implicit pressure to rush—with physical weariness, stress, and road risk being expected effects.[78]

In response to news reports and eyewitness descriptions of the challenging conditions surrounding dark stores and picking-and-packing procedures, platforms have stated that riders have no repercussions for delays and that process design places a higher priority on safety than speed.[79]

Another instance which indicates compromise of security standard is delivery workers staged a statewide flash strike on New Year's Eve 2025 to protest the 10-minute delivery model, claiming it leads to road accidents, injuries, mental stress, and unstable revenue. Additionally, the gig workers criticized the platforms' automated algorithms, claiming they penalize employees and lower their ratings if a delivery is delayed, and they wanted full social security benefits, including health insurance and pensions.[80]

The rapid commerce model relies heavily on speed, however, the reported finding of a comprehensive analysis of app delivery services found that delivery agents work in an extremely exploitative environment that exacerbates the pressure of trying to provide a delivery within the ten-minute time frame. Delivery drivers frequently speed down busy Indian roads and break many traffic laws, including driving too fast, in order to make their 10-minute deliveries. Every day, there are stories in the media about delivery drivers hurting pedestrians.

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[77] *Gujarat Mazdoor Sabha v. State of Gujarat*, (2020) 10 S.C.C. 459 (India).
[78] 10-Minute Delivery Debate, supra note 43.
[79] Id.
[80] 10-Minute Delivery Model, British Safety Council, https://www.britsafe.in (last visited Mar. 24, 2026).

All too often, delivery drivers are killed in traffic accidents.[81]

Fair working conditions with insurance, accident claims, completely eradicate the 10-minute delivery timeline, better pay and working conditions, stop exploitative work culture, incentives for professionalism of delivery agents[82]

The demands of gig workers have been a persistent problem, and the new labour laws deal with the problem of providing social security benefits to gig workers on different platforms. But it doesn't handle the gig economy holistically. *"We are required to pay a security deposit for the branded helmet, jacket and hot/cold cases, which we use while registering on the food delivery apps,"*[83]

Gig workers, represented by the IFAT, have filed a PIL before the Supreme Court, they petitioned for "The right to Social Security" for all workers, including those employed through various platforms. In particular, the petition states that those employed by companies such as Zomato, Swiggy, Ola and Uber should be classified as "unorganised Workers" and, therefore, entitled to social security payments under existing legislation. The petition points out that as a result of very long working hours, very low payment rates, and no social security benefits gig workers have been exploited. The petition calls for specific programs to provide pensions, health insurance, maternity leave, and other forms of financial assistance to gig workers. Gig workers have claimed that the relationship between themselves and the owners of the platform on which they work is an employer/employee relationship, rather than a partnership[84].

Another notable example is the case of *All India Gig Workers Union v. Uber India Systems Pvt. Ltd.*, Gig workers protesting against Uber's policies and lack of social security payments/minimum salaries have brought to light a continuing battle for fair pay and benefits in the gig economy, with the intention of changing the whole relationship model of how employers and employees work through these online platforms[85].

The Rajasthan Platform-Based Gig Workers (Registration and Welfare) Act requires them to register with a state welfare board in order to receive unique IDs that track their interactions

[81] India Scraps 10-Minute Delivery, *Diplomat*, https://thediplomat.com (last visited Mar. 14, 2026)
[82] Consumer Survey on Delivery, *Forbes India*, https://www.forbesindia.com (last visited Mar. 4, 2026).
[83]Gig Workers Strike, *Forbes India*, https://www.forbesindia.com (last visited Mar. 24, 2026).
[84] SC Seeks Response on Gig Workers' Rights, *Bar & Bench*, https://www.barandbench.com (last visited Mar. 24, 2026).
[85] Id

with various aggregators, including Uber, Swiggy, and others. The cess, which is between one and two percent of each transaction's value, will establish a social security fund to pay for health benefits, accident insurance, and other safeguards[86]. In addition, the Act established grievance redressal bodies to address issues like unjust deactivation, and aggregators who failed to comply faced fines of up to IN 50,00,000[87]. This legislation is very important because it provides coverage in areas where union law is irrelevant. However, it is not explicitly stated that the gig worker is an employee, and their rights over broader labour rights such as minimum wage or occupational safety regulations are ambiguous. It is possible that they will be turned back into contractor-type employees with strict welfare measures. This underlines the necessity for a structure that can guarantee workers' rights, such as social security, minimum salaries, and other safeguards provided to conventional workers.

ACCOUNTABILITY MECHANISM

There is a concern regarding the accountability part because when there is an application of artificial intelligence for management without any human intervention, then the question arises: who will be held liable? Either platform or algorithm, but algorithms do not possess legal personality, so platform liability can be ascertained or not. This part ascertains that it is related to accountability.

Corporations are the appropriate entities for accountability in cases when algorithms cause harm because algorithms do not possess legal personality, so they cannot be defendants[88]. Algorithms are incapable of repaying damages that the court imposes against them. Sanctions cannot change their behaviour due to absence of intention and interest or capacity to respond to such measures. Generally, corporations design, operate, and own the impactful algorithms, and there is a corporate entity linked to the resulting algorithmic harm. Thus, the vicarious responsibility principle may be used to hold a corporation accountable for an algorithm's actions.

One of the most direct justifications for considering algorithms employed by corporations is their modern operational usage. Corporations have deliberately substituted humans with algorithms that perform similar acts to humans. Algorithms can function to assess and analyse

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[86] Rajasthan Platform-Based Gig Workers (Registration and Welfare) Act, 2023, § 8 (India).
[87] Id. § 18.
[88] Joanna J. Bryson et al., Legal Lacuna of Synthetic Persons, 25 *AI & L.* 273 (2017).

credit card applications, trade stocks, and package food. They were formerly carried out by human employees and can now be completed by algorithms. Furthermore, they are not under contract, cannot be recognized as employees, and do not require any salary or benefits. So, corporations use algorithms to do identical tasks to human workers, demonstrating that corporations can be held accountable for the actions of algorithms[89]

According to the CPA E-Commerce Rules 2020[90], Uber is considered to be a 'marketplace e-commerce entity' under Rule 3(g), which defines it as: "*an e-commerce entity which provides an information technology platform on a digital or electronic network to facilitate transactions between buyers and sellers*." This definition would extend to Ola, Uber, Amazon, and other platforms that assert they only offer technological solutions. Thus, these entities will be subject to liabilities as a platform.[91]

To determine the corporate liability for civil and criminal harm caused by algorithms, the labor model treats certain algorithms as corporate employees. Based on the existing principle of corporate liability, it defines an employed algorithm as one from which a corporation gains substantial benefit and over which it maintains and remains under control.[92]

Thus, on the basis of discussion, it indicates that corporations can be held accountable for the harm that is caused by algorithms.

FINDINGS AND SUGGESTIONS

The data shows that algorithmic elimination is one of the most common methods for demonstrating digital platforms' control over workers. To address this challenge, we must move beyond compartments and sector-based interventions to an integrated framework that incorporates procedural justice and accountability into digital platform governance. India needs to create a framework to address the structural issues generated by algorithmic management.

Lack of specific legislation – there is lack of laws for addressing the protection of gig workers. The absence of such targeted legal frameworks not only exposes these workers to potential exploitation by employers but also limits their awareness of the rights and benefits available to

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[89] Mihailis Diamantis, Employed Algorithms, 72 *Duke L.J.* 797 (2022).
[90] Consumer Protection (E-Commerce) Rules, 2020 (India).
[91]Kavita v. Uber India, TCCLR, https://www.tcclr.com (last visited Mar. 24, 2026).
[92] Diamantis, supra note 89.

them

Right to Explanation and Human Review: Workers should possess a legally enforceable right to receive explanations for algorithmic decisions and to request meaningful human review of adverse outcomes. Meaningful human oversight must be mandated for all deactivation decisions that carry significant economic consequences. While automated systems may assist in identifying potential issues, final decisions regarding suspension or permanent exclusion of workers should require human review that incorporates contextual judgment and proportionality assessment. Appeals processes should be timely, accessible, and independent from the initial decision-making process.

Transparency - Platforms should be subject to mandatory transparency and reason-giving about deactivation decisions. Workers must receive clear, specific explanations of the data, criteria, and rules behind their exclusion. Transparency must also include aggregate disclosures, allowing oversight bodies and worker representatives to see patterns of unfair or discriminatory deactivation.

Innovative Enforcement Mechanisms- Utilize digital technologies like platforms and apps for recording the hours worked, the incidents that occur, the breaks taken and any near misses related to work. Develop systems for conducting remote inspections/risk assessments.

Innovation in Health Delivery- Utilize mobile clinics and partner with health insurance companies to provide health checks and access to healthcare to gig workers across geographical areas through telemedicine.

Safety of gig workers- there is need of legal framework which can provide benefits such as disability benefits, accident insurance, medical benefits, maternity benefits, provident fund schemes, or pension plans.

Collective Bargaining and Voice for the Worker- Gig workers should have the ability to organize and collectively bargain for a better working relationship under the algorithmic management system that is being used on platforms.

Specialized Dispute Resolution Mechanisms- Establish regulatory bodies/tribunals to resolve issues related to platforms/labour where algorithmic processes drive the work.