

Activist and Trade Union Explainer on Algorithmic Management of Labour¹



¹ This guide draws its findings from a joint study conducted by the Center For Labour Studies (CLS) and IT For Change on algorithmic management of labour.

A. What is Algorithmic Management of Labour?

Algorithmic Management of labour refers to the use of computer-programmed procedures to manage and coordinate labour input in workplaces, which were previously handled by human managers, particularly managerial tasks like staffing, commanding, coordinating and controlling of workers.² The input that allows algorithms to manage these different tasks is through information collected by monitoring workers' behaviour and performance.

This pattern of work organisation is the latest frontier in the digital revolution of work, which began with the expansion of information and communication technologies in the 1990s, as work through electronic devices, cloud services and cloud infrastructure to store, process and communicate information intensified.³ Common features of such a pattern of work organisation typically involve (i) requiring workers to be connected to an online platform as pre-condition for obtaining work, (ii) dividing work into standard and quantifiable components, and (iii) engaging in continuous data-based surveillance and monitoring of workers.⁴

A critical aspect of algorithmic management which is often not fully appreciated is that the algorithm is never fully automated and autonomous. It is always only partial and conditional.⁵ Human input is a necessary feature of all algorithmic systems, though the degree of this human intervention lies across a spectrum.⁶ The image portrayed of a black box is not just false but also harmful to workers. Harmful because it portrays an image of 'impenetrability' and 'impartiality', as if algorithms lie outside the control of human intervention, thereby furthering the perception of a powerless workforce with no tools to fight back.

² ILO

³ *ibid.*

⁴ Wray, Ben. *Negotiating the Algorithm: Trade Union Manual (2025)* European Trade Union Confederation. Available at this [link](#).

⁵ *ibid.*

⁶ Ammore, Louise. *Cloud Ethics Algorithms and the Attributes of Ourselves and Others*. (2020). Duke University Press. Available at: <https://www.dukeupress.edu/cloud-ethics>

B. How does the Platform Economy interact with Algorithmic Management?

Algorithmic management lends itself to a range of uses; with the platform economy currently remaining the arena for its most intensive use. Research reveals that the main functions of algorithmic management in the platform economy have been the tasks of (i) **work allocation**: algorithms primarily help match customers paying for a service to workers willing to provide service; (ii) **determination of pay**: algorithms determine the pay of workers using data inputs often not based on any standardized metrics but generally based on changing variables determined by market and consumer demand; (iii) **control**: algorithms oversee how workers execute tasks. For instance, the GPS system allows the food delivery worker to be tracked to see if the worker is following the prescribed route, the time taken to deliver etc.; (iv) **surveillance**: algorithms are able to track each moment spent by the worker on the app, including as new research has established, even when workers are not working; (v) **evaluation**: algorithms use different variables including consumer ratings to evaluate workers and consequently determine their work allocation and other aspects of their jobs; (vi) **punishment**: algorithms frequently take decisions to suspend or ban workers from platforms based on variables ranging from low ratings to complaints from customers.

C. How does **Algorithmic Management** impact **workers** and their **working conditions?**

Across the globe, various studies have established that the spread of algorithms vastly transform the foundation of work, and with it, the working conditions of workers. These studies document how algorithmic work organisation results in the creation and rise of disposable labour and contributes to widespread decline in the quality of jobs by perpetuating “job and income insecurity, due to unpredictability of work demands; [...] accidents and mental distress at work; high work intensity [...] and difficulties for work-life balance reconciliation”.⁷

In India, various studies have shown that Algorithmic management has become ubiquitous across platform based work. As per the Fair Work India Report (2024) many location-based platforms have off-late adopted a new-slot based system of work allocation which uses ‘performance criteria’ to categorise platform workers into tiers, with higher tiers given higher priority work slots,’ furthering the algorithmic control over work allocation. A report by PAIGAM which surveyed about 10,000 ride-hailing and food delivery workers across eight Indian cities found that over 68% of respondents reported “unexplained and arbitrary deductions through company algorithms” as a key issue affecting their conditions of work.⁸ Many studies have also tracked how algorithms determine both allocation and access to work in otherwise traditional occupations such as domestic and care sector work - which are moving to platforms.⁹ Evidence is also emerging of algorithmic workforce optimisation being used to support the backend logistical operations of e-commerce platforms such as Amazon and Big Basket in their operations in the country.¹⁰

⁷ Sara. Biaocco & et all. The algorithmic management of work and its implications in different contexts. (2022). Joint Research Centre, European Commission. Available at this [link](#).

⁸ PAIGM. Prisoner on Wheels? Report on Working and Living Conditions of App-based Workers in India. (2024). University of Pennsylvania. Available at this [link](#).

⁹ Rath, Aayush & Tandon, Ambika. Platform, Power & Politics. (2021). Center for Internet and Society, Available at this [link](#).

¹⁰ DN, Naveen. (2025). Case Study: Behind Big Basket's Operations Engine - A Playbook in Digital Agility & Fulfillment Precision. LinkedIn. Available at: this [link](#).

With the goal of understanding the mechanisms of algorithmic management further, between November 2024 and February 2025, a team from Centre for Labour Studies at NLSIU and from IT for Change interviewed 26 workers and 5 union organizers (one each organising ride-hailing and urban services workers, and three from the Amazon Workers Union) to study the workings of algorithmic management. The aim of the study was to understand the workings of algorithmic systems, workers' interactions with algorithms, and the impact of such systems on their conditions of work. Some of these are listed below:

I. Algorithmic management accelerates the pace of work and heightens production pressures on workers.

Workers interviewed across the industries described a milieu where algorithmic control and management of their work creates a situation where workers are increasingly left battling long working hours while struggling to meet 'despotic' production targets set by the platform.

Food delivery workers employed by Zomato in Bangalore described how the platform's algorithms gamified their tasks, compelling them to work long and exacting hours in order to meet production targets. In one instance, Zomato workers described being unable to cancel orders allocated, even when they preferred not taking it up. They claimed that when an order is cancelled, and the application is unable to find another rider, the same rider is assigned the order leaving him with no choice but to deliver the order.

Urban Company workers similarly explained that the platform's 'auto-acceptance' feature prevents them from rejecting orders, as tasks are automatically assigned by the system. Under this feature, daily targets — the number of orders a worker must complete — are determined solely by the platform's algorithm, leaving workers with no say in the matter. As a result, workers, particularly women with caregiving responsibilities at home, lose control over their working hours and are often compelled to work longer than they wish to.

In a 2024 survey by UNI Global Union and Amazon India Workers Association (AIWA), 4 out of 5 Amazon warehouse workers (a sample of 1838 participants) reported that "the targets set by Amazon are difficult or very difficult to achieve". Amazon workers also described being enslaved to the Associate Development & Performance Tracker (ADAPT), which the company uses to maximise efficiencies in its warehouse operations. Workers explained that any breaks they took, even brief bathroom breaks, were recorded by ADAPT as "idle time." This classification often carried serious consequences, ranging from verbal abuse to, in more severe instances, the risk of being blacklisted. Namit, an Amazon worker, described not visiting the washroom during work hours due to ADAPT: "If we fail to meet the targets set by the application, we face verbal abuse, are questioned about our capability to do the job, and are threatened with termination."

¹¹ UNI Global Union and Amazon India Workers Association. Exporting The Amazon Panopticon: A Survey Of Amazon Workers in India. (2024). Available at: <https://uniglobalunion.org/wp-content/uploads/Exporting-The-Amazon-Panopticon-Report.pdf>

II. Algorithmic management renders workers' access to jobs and income increasingly precarious and unpredictable.

Platforms use 'ratings' to assess workers' performance and accordingly mediate their access to work allocation, earnings, and entitlement to social security provisions. Workers engaged in location-based platforms explained that with the adoption of a slot-based system of work allocation, finding work had become more precarious and volatile.

Swiggy groups workers into three categories - Gold, Silver, Bronze . Workers who find themselves in the gold category can book slots in advance, while those in silver and bronze categories can only book a day before. Workers shared with us that often during peak hours these slots disappear in around 15 minutes, leaving workers in categories other than gold without work. Workers also shared that there is discrepancy in pay between workers who book in advance and those who don't. Workers consequently are left with highly precarious earnings. For Urban Company workers, good ratings did not automatically lead to better pay or incentive; however, poor ratings always meant backlash, either in the form of warnings or blocking of their IDs. One worker shared that despite constantly maintaining a rating score of 4.8 on an average, his earnings continued to be stagnant, with no increase.

III. Algorithmic management intensifies surveillance of workers, undermining their ability to exercise the right to freedom of association.

Food delivery workers in Bangalore shared their apprehension that the platforms' GPS system is used to track workers, and disperse collective gathering of workers. They claimed that when they congregate in an area, they are immediately allocated work in different directions, effectively dispersing the congregation of workers. Two workers even claimed to have seen an LED system in Swiggy's branch office in Bangalore, which helped managers map where workers are located.

At the Amazon warehouse, workers described their work environment as akin to being in a 'surveillance state'. Workers claimed that there are over 2000 CCTV cameras tracking them at the warehouse. Coupled with the ADAPT tracker that marked any time spent not working as 'idle time', workers claimed not having any breathing time for themselves or even talk with their peers.

IV. Algorithmic management obscures workers' ability to understand how their working conditions are shaped.

Worker testimonies from our study exposed how workers are in the dark about how algorithms impact their work - especially in allocation and monitoring of work. The parameters and criteria of work allocation on platforms are in constant flux, leaving workers unable to take informed decisions about their work. A labour organiser working with Urban Company, explained how Urban company has two tiers of work: premium category that includes tasks like facials, hair treatments and space services, and a normal category which includes tasks such as foot massages. The category of work allocated to a worker is completely controlled by the algorithm and is unpredictable. Since premium work paid more, workers were left anxiously speculating how to access premium work.

Similarly, at Amazon warehouse in Manesar, workers expressed being completely unaware of the metrics the ADAPT tool uses to penalize workers. Previously, if workers received three bad feedbacks, one ADAPT [notification] would be generated; if the worker got three ADAPTs (i.e., nine negative feedbacks), the worker was terminated. However, the system has now changed. There is no longer feedback given to workers. The manager triggers an ADAPT by tracking performance through the ID card, using a network of computers, and workers are neither given information on what has triggered the ADAPT nor the chance to challenge the ADAPT. This is particularly stressful for workers, simultaneously knowing they are being monitored while being in the dark about which actions are likely to trigger disciplinary proceedings or penalties.

Workers from Amazon who worked part-time also shared how getting work through slots on the app is very unpredictable. Slots are released randomly on the app without prior notification. A worker compared accessing work through slots as akin to booking a tatkal ticket. This randomness in algorithmic output kept workers constantly in a state of anxiety and alienation.

V. Algorithmic management is structured in ways that systematically disadvantage workers relative to other stakeholders in the system.

Our investigation revealed that the features of platforms are designed to be consistently unfair to workers. Thus, a worker from Urban Company explained that "Professional not reachable" is often used by customers for cancellation, due to paucity of options in the menu. The worker lamented that customers often just choose whichever option they perceive will

reduce their penalty; the result is always that the worker ends up suffering.

Another Urban company worker felt the platform even resorted to deceitful practices to defend unfair and unjust decisions. The worker explained how he was arbitrarily ejected from sofa cleaning duty - which offers higher pay - after raising a complaint about his workplace. Upon enquiry, he was told that it was due to a consumer complaint. However, he shared that there was no message, email or notification from any customer or the management; clearly there had been no complaint.

VI. Algorithmic management creates blurred lines of responsibility and accountability, making it harder for workers to seek effective redress for grievances.

Workers explained that their grievances with the platform are not solely confined to algorithms. Control over workers is exercised not just by algorithms, but also by platform managers and sub-contractors. However, the degree and extent of control is opaque to workers who describe being left with a sense of there being no one to demand answers from.

Workers at the Amazon warehouse described how the supposed grievance redressal mechanisms were only a smokescreen for entrenching control over workers. They claimed that they had no legally mandated grievance redressal committees; instead they had to raise grievances through the 'My Voice' App. Even though these grievances were meant to be public, HR officials were able to hide grievances that criticized managers.

Urban Company workers shared how platforms and managers often feign helplessness in relation to algorithmic decisions. One worker had missed a job due to a technical/network issue which led to the platform logging his task as 'missed'. The company simply responded by stating that the worker had not accepted the job, and they could do nothing to reverse the decision. The decision of the app is rigid and workers are penalised frequently for mistakes they have nothing to do with.

D. How does India regulate Algorithmic Management of Work?

In India, the conversation on regulation of platform work has largely been restricted to seeking legal recognition of platform workers as employees. Being recognised as workers opens the door to a wide array of rights including the right to a minimum wage, to statutory leaves and right to unionise among other labour rights. However, the role of algorithms and how it shapes workers' experience and conditions of work are often treated as peripheral in these conversations.

Over the past two years, gig worker legislations have emerged from different states. Beginning with Rajasthan which passed a law in 2023, four states have passed laws, with the content of the legislation being broadly similar. A unifying thread across the different legislations is the superficial treatment given to algorithmic management and its regulation.

The legislation in Rajasthan does not acknowledge algorithms at all, choosing merely to focus on social security and grievance redressal. In Karnataka, Telangana and Jharkhand, the legislations acknowledge “automated monitoring and decision-making systems,” offering workers a limited right to request information with respect to how the decision making parameters of algorithms impact working conditions, including fares, earnings, customer feedback etc. However, they do not grant workers the right to challenge these decisions. What is the value of accessing information if it cannot be used to claim workers' rights?

The Bihar legislation goes a bit further, granting workers the right to have algorithmic decisions challenged and reviewed. This is a step forward in comparison to other regulations, but not far enough. For one, decoding complex algorithmic data requires technical expertise and significant time and resources, which workers typically lack. None of the legislations passed, including the Bihar legislation, make efforts to offset this asymmetry. Another critical flaw in all the legislations is

their exclusive focus on the individual worker's right to access information. There is no provision allowing trade unions or worker collectives to exercise similar rights, thereby denying workers the ability to act collectively.

As our findings show, algorithmic systems shape every facet of the workday: from task allocation and pay determination to ratings, surveillance, and the right to organise. Their pervasive presence mediates nearly every worker interaction, often invisibly. A just and effective regulatory framework must be one which focuses not just on the inputs or design of algorithmic systems, but on their outcomes—how these systems are actually deployed to reinforce inequities. It is the impacts of algorithmic management that need to be regulated.

E. Some future possible directions

One promising path forward is the adoption of a co-determination model, which centres worker participation in the governance of algorithmic systems. This approach envisions accountability not as a one-time act of disclosure, but as a continuous, negotiated process in the workplace. Workers, through formal mechanisms, must be empowered to shape how algorithms operate and how they impact everyday labour conditions. This model could adopt a structure similar to the works committee, where representatives of workers become part of consultative bodies that determine the actions of the algorithm in a particular platform.

Globally, regulatory efforts are beginning to emerge. The European Union's Platform Work Directive, the General Data Protection Regulation (GDPR), the proposed Artificial Intelligence Act, and various U.S. legislative efforts all reflect growing recognition of the need to address algorithmic harms. In parallel, a growing body of academic and civil society research is shaping visions of algorithmic justice.

Drawing from these initiatives—while also acknowledging their limits—we propose a non-exhaustive set of principles and recommendations to guide the development of a robust regulatory framework for algorithmic systems in the platform economy. These proposals are grounded in a commitment to worker agency, democratic oversight, and a rebalancing of power in the digital workplace.

F. What should workers and unions demand?¹²

1. Accessibility, Explainability and Accountability of Algorithms

Union's demands must not be restricted to merely seeking information to access the algorithm. This is akin to what the ETUC claims is merely seeking to look under the bonnet of the car to see how the car is powered. All that will be offered is the source code powering the algorithm - which is a black box that is not particularly of use to workers.¹³ What unions must demand instead is the 'right to explainability' by the platform. This will entail the platform revealing what rules and reasoning informs the algorithm in processing its various decisions and their outcomes.

2. Collective rights of Unions

Currently, only workers have the right to seek data. This potentially makes them vulnerable to being targeted and victimized. Therefore, it is important for unions to be able to seek this data.

Examples from the EU reveal that where platform companies have responded with data, it is often almost impossible to analyse the data without the aid of data specialists. It is virtually impossible for individual workers to have access to such aid. Only unions may be able to afford such analysis. They can synthesise data effectively to mount legal challenges, collectively bargain for better wages, or even seek better and more effective legal regulations.

3. Government mandated guarantee to publish data

Platforms must be required to share data with the government. In America, Uber has shared data to about 54 municipal governments across the USA. In 2018, on the basis of data released by ride-sharing companies

¹² Wray, Ben. Negotiating the Algorithm: Trade Union Manual. (2025). *European Trade Union Confederation*. Available at: <https://www.etuc.org/sites/default/files/publication/file/2025-09/Negotiating%20the%20Algorithm%20-%20Trade%20Union%20Manual%20%28updated%29.pdf>

¹³ Ibid.

companies Uber and Lyft, New York City Taxi & Limousine Commission (NYCTL) was able to analyse data on wages, fleet utilisation rates, passenger waiting times, congestion, air pollution etc. to decide how many new licenses to issue and set minimum pay rates that is optimal for both customers and drivers.¹⁴

4. Workers access to data

The worker must have the right to be informed about the data collected, the purpose for which it is gathered, how it is processed, and the outcomes of such processing. This right to know must be coupled with the right to seek a review and correction of any decision arising from the data. Further, both the data and the outcomes of its processing must be presented in a manner that is clear and comprehensible to a layperson.

5. Co-creation and co-participation of workers in the deployment of algorithms at the workplace

A co-determination model must be established to ensure that workers and unions have a meaningful voice in the design and deployment of algorithmic management systems that shape their working conditions. Such a model would help democratise the workplace and shift workers and unions from passive recipients to active participants in shaping their working conditions. It could take various forms, including consultations with workers during the development of algorithmic systems, representation of workers and unions on company boards, and on grievance mechanisms.

6. Restricted collection of workers' data

The processing of personal data that is not directly related to, and strictly necessary for the performance of the employment contract must be prohibited. In all circumstances, the processing of any personal data concerning the emotional or psychological state of platform workers and data that can be used to infer their ethnic origin, migration status, political opinions, religious or philosophical beliefs, disability, state of health, including chronic disease or HIV status, emotional or psychological state, trade union membership sex life or sexual orientation must be expressly banned. Data used to predict actual or potential trade union activity, such as right to collective bargaining and the right to information and consultation must be restricted.¹⁵ No data can be collected while the person performing platform work is not working or seeking work.¹⁶

¹⁴ Wray, Ben. Negotiating the Algorithm: Trade Union Manual. (2025). *European Trade Union Confederation*. Available at: https://www.etuc.org/sites/default/files/publication/file/2025-09/Negotiating%20the%20Algorithm%20-%20Trade%20Union%20Manual_ETUC%20%28updated%29.pdf

¹⁵ Directive (EU) 2024/2831 of the European Parliament And Of the Council on improving working conditions in platform work. Available at: <https://eur-lex.europa.eu/eli/dir/2024/2831/oj/eng>

¹⁶ Ibid.