



Rebecca Dixon
President & CEO

www.nelp.org

NELP National Office
90 Broad Street
Suite 1100
New York, NY 10004
212-285-3025

Washington, DC Office
1350 Connecticut Avenue NW,
Suite 1050
Washington, DC 20036
202-887-8202

California Office
2030 Addison Street
Suite 420
Berkeley, CA 94704
510-982-5945

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**Comments in Response to Office of Science and Technology Policy (“OSTP”),
Docket OSTP_FRDOC 0001-0004**
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To Whom It May Concern:

The National Employment Law Project (NELP) submits these comments in response to the Request for Information (RFI) on Automated Worker Surveillance and Management initially published by the White House Office of Science and Technology Policy (OSTP) on May 1, 2023.

NELP is a nonprofit research and policy organization with over 50 years of experience advocating for the employment and labor rights of underpaid workers. We seek an equitable, good jobs economy by advancing policies that ensure jobs pay well, provide ample benefits, foster health and safety, and decrease racial income disparities; we also champion robust unemployment insurance for those unable to work. NELP recognizes that corporate respect for worker autonomy, responsiveness to worker voice and judgment, and equitable and transparent decision-making are essential foundations of any good job. Accordingly, we support policies that foster workplace democracy and encourage workers to join together to improve working conditions. NELP works closely with worker centers and other community-based organizations with members who are subject to workplace surveillance and algorithmic management, and we base our comments in part on understandings we have developed through those relationships.

In recent years, corporations have vastly expanded automated or electronic surveillance of workers and reliance on data-driven or algorithmic management. These two practices are distinct, though both pose harms to workers and threaten to degrade working conditions, particularly for workers of color as we explain below. For the purposes of our comments, however, NELP will largely follow the approach of the RFI and refer to both practices together as “Automated Worker Surveillance and Management” (AWSM). Our comments discuss our concern with how corporate adoption of AWSM can exacerbate existing challenges to an equitable, good jobs economy. Specifically, our comments highlight that:

1. AWSM can enable discrimination in recruitment and hiring, and can perpetuate occupational segregation;
2. AWSM enables corporations to mask control and deny accountability, degrading working conditions and fostering racial income and wealth disparities;
3. AWSM can increase barriers to organizing and bargaining collectively, particularly in industries with disproportionately high percentages of Black and immigrant workers;
4. AWSM can combine with other health and safety hazards to amplify unhealthy and unsafe work environments;
5. AWSM is often used to discipline and terminate workers without transparency or meaningful processes to contest decisions, increasing precarity and potentially amplifying race inequities; and
6. AWSM facilitates unfair, unpredictable, and discriminatory pay.

We conclude by highlighting the need to deliberately incorporate worker voice, and we recommend policy reforms.

1. Data-driven, automated recruitment and hiring systems can be discriminatory and perpetuate occupational segregation.

Workers' access to jobs is increasingly mediated by opaque digital hiring systems. In recent years, employers including Amazon, Target, and Hilton, have begun to use data-driven, automated tools to recruit, screen, and select job candidates. These systems often draw on data covering multiple facets of candidates' personal and professional lives and use artificial intelligence to make predictions about candidate job fit and performance. The systems reflect the biases of the people and management regimes that design them, and the biased data they are fed,¹ and can create barriers to employment for people from protected groups, for workers whom employers determine are likely to exercise organizing and collective bargaining rights, and for people with arrest and conviction records.² Because of this "bias in, bias out" problem, scholars caution that automated hiring processes "challenge the American bedrock ideal of equal opportunity in employment, as such automated practices may not only be deployed to exclude certain categories of workers but may also be used to justify the inclusion of other classes as more 'fit' for the job."³ Moreover, unregulated algorithmic hiring creates risks of algorithmic repudiation where the same applicants experience repeated discrimination due to employers' ability to retain or even share applicant profiles.⁴ A recent study by Cambridge University researchers found that these systems may "unintentionally entrench cultures of inequality and discrimination" and reproduce, rather than neutralize, biases.⁵

For workers seeking jobs on digital labor platforms, on-demand jobs are allocated by secret algorithms. Job assignments, including the determination of which worker receives a job when more than one worker is awaiting work in the same location, may be determined by biased data, such as customer ratings.⁶

Further, a study of job recruitment involving social media ad-targeting found that delivery-optimization algorithms on the company's platform were perpetuating occupational segregation by gender and race. When researchers examined the audience for broadly targeted job positions, they found that the audience was 85 percent women for supermarket cashier positions and 75 percent Black for taxi driver positions.⁷

2. AWSM enables corporations to avoid accountability; this degrades wages and working conditions and fosters racial wealth and income inequality.

Increasingly, corporations are turning to AWSM to manage and control workers even as they deny any responsibility for their wages or working conditions. AWSM empowers corporations to surveil workers more easily, collect data for secret algorithms, and use those algorithms to determine the terms and conditions of work. This growing reliance on AWSM enables corporations to mask their significant control even as they strip workers of core employment and labor rights such as the right to minimum wage, overtime, or the right to organize or be free from discrimination. Corporations have used AWSM to shed responsibility in at least two ways: first, by

¹ Aaron Rieke & Miranda Bogen, *Help Wanted: An Examination of Hiring Algorithms, Equity, and Bias*, UPTURN, Dec. 10, 2018, available at <https://www.upturn.org/work/help-wanted/>. See also Ifeoma Ajunwa, *An Audit Imperative for Automated Hiring Systems*, 34 HARVARD J. OF LAW & TECH 622, 684 (Spring 2021) ("automated decision-making cannot be fully disentangled from human decision-making"), available at <https://jolt.law.harvard.edu/assets/articlePDFs/v34/5.-Ajunwa-An-Auditing-Imperative-for-Automated-Hiring-Systems.pdf#page=64>.

² Miranda Bogen, *All the Ways Hiring Algorithms Can Introduce Bias*, HARV. BUS. REV., May 6, 2019, available at <https://hbr.org/2019/05/all-the-ways-hiring-algorithms-can-introduce-bias>.

³ Ajunwa, *Audit Imperative*, *supra* n. 1 at 623.

⁴ *Id.* at 681-82.

⁵ Eleanor Drage and Kerry Mackereth, *Does AI Debias Recruitment? Race, Gender, and AI's "Eradication of Difference"*, PHILOS. TECHNOL. 35, 89 (2022), available at <https://doi.org/10.1007/s13347-022-00543-1>.

⁶ Alex Rosenblatt et al., *Discriminating Tastes: Customer Ratings as Vehicles for Bias*, DATA & SOC'Y (October 2016), https://datasociety.net/pubs/ia/Discriminating_Tastes_Customer_Ratings_as_Vehicles_for_Bias.pdf.

⁷ Muhammad Ali, et al., *Discrimination through optimization: How Facebook's ad delivery can lead to skewed outcomes*, COMPUT. AND SOC'Y (Sept. 12, 2019), <https://arxiv.org/pdf/1904.02095.pdf>.

falsely insisting that workers are independent contractors rather than employees; and second, by facilitating subcontracting to third parties over which they are able to use AWSM to maintain significant control.

AWSM is used to obscure corporate control and enable corporations to mislabel employees as independent contractors in underpaid industries with disproportionate numbers of Black and immigrant workers.

The corporate adoption of AWSM as a means of exerting non-transparent control is well documented. As the Federal Trade Commission noted in the context of digital labor platform workers:

[They] often do not have the information they need to know when work will be available, where they will have to perform it, or how they will be evaluated. Behind the scenes, ever-changing algorithms may dictate core aspects of workers' relationship with a given company's platform, leaving them with an invisible, inscrutable boss.⁸

This "invisible, inscrutable boss" may also use algorithmic pay formulas to personalize wages, which are neither negotiated nor transparent.⁹ Likewise, these bosses employ algorithmic rating systems that they use to discipline or terminate workers, leaving the workers at constant risk of sudden and potentially devastating economic consequences.¹⁰ The adoption of AWSM is particularly prevalent in corporations that use app-based labor platforms, where companies like Uber use gamified in-app reward systems, variable pay, and selective "surge-pricing" to effectively control where workers go, how long they work, and what kinds of trips they accept.

Yet many of the digital labor platform corporations that use AWSM as a hidden boss—to assign tasks, determine pay, and discipline or terminate workers—simultaneously insist that their workers are autonomous independent contractors, i.e., that the workers are in business for themselves.¹¹ In so doing, they strip their workers' of rights to minimum wage, overtime, workers' compensation, unemployment insurance, health and safety protections, and protections from harassment and discrimination. They also shift the costs and risks of running a business to the workers and undermine the competition by reducing payroll costs. Corporate reliance on AWSM to facilitate mislabeling workers as independent contractors therefore undermines access to bedrock employment and labor law protections and social insurance programs.¹² It also enables unfair competition and helps starve programs such as Medicare, unemployment insurance, and workers' compensation.¹³

⁸ FED. TRADE COMM'N, POLICY STATEMENT ON ENFORCEMENT RELATED TO GIG WORK 8 (Sept. 15, 2022), https://www.ftc.gov/system/files/ftc_gov/pdf/Matter%20No.%20P227600%20Gig%20Policy%20Statement.pdf.

⁹ See, e.g., Zephyr Teachout, *Algorithmic Personalized Wages*, FORHAM L. LEGAL STUD. RSCH, NO. 4358817, 2023 (forthcoming 2023), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4358817#. See also Section 6, *infra*.

¹⁰ See generally *Fired by an App: The Toll of Secret Algorithms and Unchecked Discrimination on California Rideshare Drivers*, ASIAN AMERICANS ADVANCING JUSTICE, RIDESHARE DRIVERS UNITED (Feb. 2023), available at <https://www.drivers-united.org/fired-by-app>. See also Alex Rosenblat, Opinion, *When Your Boss is an Algorithm*, N.Y. TIMES, Oct. 12, 2018, available at <https://www.nytimes.com/2018/10/12/opinion/sunday/uber-driver-life.html?smid=tw-nytopinion&smtyp=cur>. See also Section 5, *infra*.

¹¹ Aiha Nguyen, *The Constant Boss: Work Under Constant Surveillance*, DATA & SOC'Y at 10 (May 19, 2021), https://datasociety.net/wp-content/uploads/2021/05/The_Constant_Boss.pdf ("Data-centric systems have allowed employers to exert control over workers while claiming workers enjoy greater autonomy."). See also Kathryn Zickuhr, *Workplace Surveillance is Becoming the New Normal for U.S. Workers*, WASH. CTR. FOR EQUITABLE GROWTH (AUG. 18, 2021), available at <https://equitablegrowth.org/research-paper/workplace-surveillance-is-becoming-the-new-normal-for-u-s-workers/>.

¹² Sarah Leberstein and Catherine Ruckelshaus, *Independent Contractor v. Employee: Why Misclassification Matters and What we can do to Stop It*, NAT'L EMP. L. PROJECT (May 2016), <https://s27147.pcdn.co/wp-content/uploads/Policy-Brief-Independent-Contractor-vs-Employee.pdf>. See also, e.g., Rebecca Smith & Sarah Leberstein, *Rights on Demand: Ensuring Workplace Standards in the On-Demand Economy*, NAT'L EMP. L. PROJECT (Sept. 2015), <https://s27147.pcdn.co/wp-content/uploads/Rights-On-Demand-Report.pdf>.

¹³ Leberstein, *Why Misclassification Matters*, *supra* n. 12.

Meanwhile, workers in industries where their employers' independent contractor misclassification is prevalent—including those corporations that use AWSM to control the work—earn poverty wages and tend to make less than their employee counterparts. For example, a 2019 analysis by the Economic Policy Institute found that the average Uber driver's wage was just \$9.21 per hour after deducting fees and expenses, putting them in the lowest ten percent of wage earners, and earning lower than the minimum wage in many states and in the three largest cities.¹⁴ Similarly, a national study of workers hired via a digital labor platform (including delivery, ride-hail, and domestic workers) found that 1 in 7 workers earned less than the federal hourly minimum wage, and 30 percent of digital platform workers received a Supplemental Nutrition Assistance Program benefit, compared to 15 percent of employees in comparable service-sector jobs.¹⁵ Most recently, a study of the economic costs of misclassification to workers in 11 high-violation industries found, for example, that “a typical home health aide, as an independent contractor, would lose out on as much as \$9,529 per year in income and benefits compared with what they would have earned as an employee.”¹⁶

The impact of AWSM-supported misclassification of employees as independent contractors on communities of color is deeply disturbing. Persistent occupational segregation means that such misclassification disproportionately harms Black, Latinx, and Asian workers. As a group, workers of color—Black, Latinx, Asian/Pacific Islander, and Native American workers—are overrepresented in high-violation industries such as construction, trucking, delivery, home care, agricultural, personal care, ride-hail, and janitorial and building service occupations by over 40 percent; they comprise just over a third of workers overall, but make up between 47 and 91 percent of workers in these occupations.¹⁷ In digital labor platform work where AWSM is prevalent, Black and Latinx workers are overrepresented by 45 percent—more even than in more traditional misclassification-prone sectors.¹⁸ Thus, AWSM-supported independent contractor misclassification fosters a second-tier workforce comprised predominantly of workers of color stripped of core employment protections.¹⁹ Because it also comes with the significant wage and benefit penalties noted above, adoption of AWSM to perpetuate independent contractor misclassification also exacerbates racialized income and wealth inequities.

Lead firms in subcontracted work relationships use AWSM to exercise control while denying employer responsibility.

AWSM is not only used to enable corporations to mask control as they mislabel workers as independent contractors but is also used to control subcontracted work structures. A prime example is Amazon's last-mile delivery model, in which Amazon uses subcontractor middle-managers to mediate its employment of some 275,000 delivery drivers, responsible for realizing the company's two-day shipping guarantee.²⁰ Although

¹⁴ Lawrence Mishel, *Uber and the Labor Market: Uber Drivers' Compensation, Wages, and the Scale of Uber and the Gig Economy*, ECON. POL'Y INST. at 13 (May 2019), <https://files.epi.org/pdf/145552.pdf>.

¹⁵ Ben Zipperer, et al., *National Survey of Gig Workers Paints a Picture of Poor Working Conditions, Low Pay*, ECON. POL'Y INST. (Jun. 2022), available at <https://www.epi.org/publication/gig-worker-survey/>.

¹⁶ John Schmitt, et al., *The Economic Costs of Worker Misclassification*, ECON. POL'Y INST. (Jan. 25, 2023), <https://files.epi.org/uploads/The-economic-costs-of-worker-misclassification-1.pdf>.

¹⁷ NELP analysis of March 2022 Current Population Survey Annual Social and Economic Supplement microdata. For underlying data, see *CPS Annual Social and Economic Supplement*, U.S. Census Bureau, available at <https://data.census.gov/mdat/#/search?ds=CPSASEC2022>.

¹⁸ See U.S. Bureau of Lab. Statistics, *Electronically Mediated Work: New Questions in the Contingent Worker Supplement*, U.S. DEP'T OF LAB., MONTHLY LABOR REVIEW (Sept. 2018), available at <https://www.bls.gov/opub/mlr/2018/article/electronically-mediated-work-new-questions-in-the-contingent-worker-supplement.htm> (noting over-representation of Black and Latinx workers).

¹⁹ See, e.g., Veena Dubal, *The New Racial Wage Code*, 15 HARV. L. & POL. REV. 511 (2022) (arguing that gig-worker carve outs are made possible by and reproduce racial subjugation).

²⁰ See Anna Kramer, *Amazon's Entrepreneur Dream is Closer to a Nightmare for Many*, PROTOCOL, Mar. 7, 2022, available at <https://www.protocol.com/workplace/amazon-delivery-program-trap>; see also *How Amazon's DSP Program has Created \$26 billion in Revenue for Owners*, Amazon Corporate Website, Aug. 19, 2022, available at <https://www.aboutamazon.com/news/transportation/how-amazons-dsp-program-has-created-26-billion-in-revenue-for-owners>.

delivery drivers are on the payroll of the subcontractor “delivery service partner,” (DSP) Amazon effectively controls the work through its smartphone app: setting daily routes, van color and Amazon logo signage, delivery quotas, and delivery deadlines for drivers by communicating through the app.²¹ Although directly employed by a DSP, drivers are required to sign “Biometric consent” forms allowing Amazon’s constant surveillance and related performance control via AI-powered cameras as a condition of work.²² The e-commerce giant installs these video cameras in the vans of the DSP drivers, sometimes using inaccurate data to penalize drivers or deny DSPs bonuses they may need to make vehicle repairs or enhance driver pay.²³

In the wireless telecommunications industry, large carriers like AT&T, Verizon, and T-Mobile are increasingly outsourcing retail operations to third-party “authorized retailers.” A 2022 survey of workers at those authorized retailers revealed that large carriers often exert operational control over authorized retailers via digital performance tracking systems. Workers reported that, through those systems, carriers establish and frequently change performance benchmarks that determine pay for the commission-driven work.²⁴

In short, AWSM has frequently been deployed by corporations to obscure their control and manage their workforces while insisting that their workers are independent contractors or outsourcing the work to third parties. By coopting the technology for their benefit, these corporations strip a disproportionately high percentage of Black and Latinx workers of bedrock rights and protections, degrade wages and working conditions and foster racial wealth and income inequality.

3. AWSM often increases barriers to organizing and bargaining collectively, particularly in industries with disproportionately high percentages of Black and immigrant workers.

As the National Labor Relations Board (NLRB) General Counsel recently cautioned, AWSM can infringe upon workers’ Section 7 rights under the National Labor Relations Act (NLRA). She noted in particular, “the potential for omnipresent surveillance and other algorithmic-management tools to interfere with the exercise of Section 7 rights by significantly impairing or negating employees’ ability to engage in protected activity and keep that activity confidential from their employer, if they so choose.”²⁵

The use of AWSM to interfere with NLRA rights is not simply theoretical. Workers at Walmart discovered the company monitors online conversations about the union.²⁶ HelloFresh tracks social media posts about the union by employees, and other corporations monitor work emails to identify what a former chair of the NLRB called

²¹ Lauren K. Gurley, *Amazon Drivers Are Instructed to Drive Recklessly to Meet Delivery Quotas*, VICE MOTHERBOARD, May 6, 2021, available at <https://www.vice.com/en/article/xgxx54/amazon-drivers-are-instructed-to-drive-recklessly-to-meet-delivery-quotas>.

²² James Vincent, *Amazon delivery drivers have to consent to AI surveillance in their vans or lose their jobs*, THE VERGE, Mar. 24, 2021, available at <https://www.theverge.com/2021/3/24/22347945/amazon-delivery-drivers-ai-surveillance-cameras-vans-consent-form>.

²³ See Lauren K. Gurley, *Amazon’s AI Cameras Are Punishing Drivers for Mistakes They Didn’t Make*, VICE MOTHERBOARD, Sept. 20, 2021, available at <https://www.vice.com/en/article/88npjv/amazons-ai-cameras-are-punishing-drivers-for-mistakes-they-didnt-make>. See also David Hanley & Sally Hubbard, *Eyes Everywhere: Amazon’s Surveillance Infrastructure and Revitalizing Worker Power*, OPEN MARKETS (Sept. 2020), https://static1.squarespace.com/static/5e449c8c3ef68d752f3e70dc/t/5f4cfea23958d79eae1ab23/1598881772432/Amazon_Report_Final.pdf.

²⁴ See *Broken Network: Workers Expose Harms of Wireless Telecom Carriers’ Outsourcing to “Authorized Retailers,”* NAT’L EMPL. L. PROJECT, COMM’NS WORKERS OF AM. (Feb. 2023), https://cwa-union.org/sites/default/files/2023-02/20230206_BrokenNetwork.pdf.

²⁵ Office of the General Counsel, Memorandum GC 23—2, *Electronic Monitoring and Algorithmic Management of Employees Interfering with the Exercise of Section 7 Rights*, NAT’L. LAB. REL. BD., October, 2022, available at <https://www.nlr.gov/guidance/memos-research/general-counsel-memos>.

²⁶ Susan Berfield, *How Walmart keeps an eye on its massive workforce*, BLOOMBERG BUSINESS, Nov. 24, 2015, available at <https://www.bloomberg.com/features/2015-walmart-union-surveillance/>.

“pre-union activity, employee discontent.”²⁷ Further, corporations have used AWSM to gauge the likelihood that workers would organize. For example, Amazon-owned Whole Foods used a combination of data concerning the poverty levels of workers’ neighborhoods, an index to measure the potential for racial solidarity, and measures of employee “loyalty” to identify stores where workers may support forming a union.²⁸

AWSM has also enabled corporations to maintain high levels of control over their labor force while denying labor rights under the NLRA. They do this through subcontracts that demand AWSM while denying their status as a joint employer. For example, just last month, drivers who were directly employed by a DSP at an Amazon fulfillment center in Southern California formed a union with the Teamsters, gaining voluntary recognition from the DSP.²⁹ Amazon responded by announcing its intention to cut its contract with that subcontractor, effectively terminating the employment of the unionized drivers because they had exercised their Section 7 rights.³⁰ Other lead firms that adopt AWSM to manage the work of their subcontracted labor may see this as a lesson and follow Amazon’s lead, adopting AWSM while denying responsibility for NLRA violations.

But these obvious efforts to chill organizing are not the only threat that unregulated AWSM poses. AWSM can also chill or undermine workers’ exercise of their legal rights to organize in myriad other ways.

Corporate use of AWSM echoes slavery-based management and reinforces systemic bias.

Data-driven, algorithmic management is premised on quantifying work and work outcomes, and thus is readily applied to jobs where tasks are easily measured like retail, food service, warehousing, logistics, agriculture, hospitality, domestic work, and health care.³¹ Many of these industries have low levels of workers represented by unions³² and high percentages of Black and immigrant workers.³³ Unregulated corporate use of AWSM can intensify the harms associated with unfairness and lack of transparency in the “at will” economy, undermining workers’ ability to speak up about mistreatment and perpetuating racial inequities.³⁴ Low union density and increased surveillance can also be mutually reinforcing systems: suppressing workers’ power to insist on fair and transparent adoption and implementation of AWSM enables corporations to unilaterally and opaquely use it; and the constant pressure on workers to meet algorithmic demands under increased surveillance increases workers’ feeling of precarity and limits their ability to express power.³⁵

²⁷ Jo Constanz, “They were spying on us’: Amazon, Walmart Use Surveillance Technology to Bust Unions, NEWSWEEK, Dec. 13, 2021, available at <https://www.newsweek.com/they-were-spying-us-amazon-walmart-use-surveillance-technology-bust-unions-1658603>.

²⁸ Daniel A. Hanley and Sally Hubbard, *Eyes Everywhere: Amazon’s Surveillance Infrastructure and Revitalizing Worker Power*, OPEN MARKETS (Sept. 2020), https://static1.squarespace.com/static/5e449c8c3ef68d752f3e70dc/t/5f4cffe23958d79eae1ab23/1598881772432/Amazon_Report_Final.pdf.

²⁹ Luis Feliz Leon, *Teamsters Begin Major Amazon Fight*, AMERICAN PROSPECT, May 4, 2023, available at <https://prospect.org/labor/2023-05-04-teamsters-begin-major-amazon-fight/>.

³⁰ *Id.* See also *Unfair Labor Practice Charge Against Amazon Logistics, Inc.*, NLRB Board Region 31 (filed May 2, 2023), <https://teamster.org/wp-content/uploads/2023/05/5323ULPChargeAgainstAmazon.pdf>.

³¹ Nguyen, *Constant Boss*, *supra* n. 11.

³² U.S. Bureau of Lab. Statistics, *Union Members – 2022*, News Release USDL-23-0071, U.S. DEP’T. OF LAB., Jan. 19, 2023, <https://www.bls.gov/news.release/pdf/union2.pdf>.

³³ See U.S. Bureau of Lab. Statistics, *Labor Force Statistics from the Current Population Survey*, U.S. DEP’T. OF LAB., available at <https://www.bls.gov/cps/cpsaat18.htm> (last visited May 25, 2023) (showing employed persons by detailed industry, sex, race, and Hispanic or Latino ethnicity).

³⁴ Irene Tung, et al., *Just Cause Job Protections: Building Racial Equity and Shifting the Power Balance Between Workers and Employers*, NAT’L EMPL. L. PROJECT (Apr. 30, 2021), available at <https://www.nelp.org/publication/just-cause-job-protections-building-racial-equity-and-shifting-the-power-balance-between-workers-and-employers>.

³⁵ U.S. Congress, *The Electronic Supervisor: New Technology, New Tensions*, OFFICE OF TECHNOLOGY ASSESSMENT, OTA-CIT-333 (1987), <https://files.eric.ed.gov/fulltext/ED299406.pdf>; see also Nguyen, *Constant Boss*, *supra* n. 11, at 5.

This disempowering feedback loop is an extension of bosses' long-standing use of work quotas and related distrust of Black and immigrant workers, whose worth was historically based on their ability to meet such quotas. It is a form of management rooted in the U.S. enslavement economy, where slavers ranked and attached monetary value to workers based on their productivity even as they surveilled based on racist beliefs about dishonesty, laziness, and trustworthiness.³⁶ Using AWSM to code workers as good or bad mirrors the codes used to label Black and immigrant people in the carceral system ("high risk/low risk"), in the granting of social insurance ("worthy/unworthy"), and in access to the consumer credit markets ("excellent/good/poor").³⁷ Once attached to a worker, these codes can reify stereotypes about workers of color among management and determine when they are scheduled, what types of job tasks they are assigned, whether they are meeting standards, and whether they keep their job.³⁸ If terminated as a result of such codes, quotas or algorithms, a workers' access to critical unemployment insurance benefits may also be jeopardized.

Adoption of AWSM to code workers allows corporations to practice a form of just-in-time staffing where the algorithm itself determines who should be fired to minimize costs and maximize profits.³⁹ And by pushing AWSM across companies and even industries, corporations can create a sense that always being watched is simply the normative condition at work, making it very difficult for employees to prove that any particular instance of surveillance was an effort to stymie protected concerted action.⁴⁰

Constant and opaque use of AWSM increases worker perceptions of precarity and decreases solidarity among co-workers.

In a unionized workplace, workers may be able to negotiate provisions in a collective bargaining agreement to address data collection, data sharing, and data use, and if a worker suspects unfair use of data to justify discipline or termination there would be a procedure in place to grieve the decision.⁴¹ But in most private workplaces without a recognized union, corporations can adopt AWSM in a "black box," where workers have no voice or insight into how it was programmed, how it was put in place, or how the data is used. Trying to maintain algorithm-created productivity standards or understanding changing quota systems may leave workers too physically tired or demoralized to compare thoughts about working conditions.⁴² In some settings, productivity data may literally be used to pit workers one against the other; worker scores may be shared publicly on "leaderboards" comparing each worker's progress toward the quotas to others.⁴³

³⁶ *Slavery's Capitalism: A New History of American Economic Development* (Sven Beckert & Seth Rockman, eds.: 2016); Simone Browne, *Dark Matters: On the Surveillance of Blackness* (Duke U. Press: 2015).

³⁷ Virginia Eubanks, *Want to Predict the Future of Surveillance? Ask Poor Communities*, THE AMERICAN PROSPECT, January 15, 2014, available at <https://prospect.org/power/want-predict-future-surveillance-ask-poor-communities/>. Danielle Keats Citron and Frank A Pasquale, *The Scored Society: Due Process for Automated Predictions*, 89 WASH. L. REV. 1 (2014), available at https://scholarship.law.bu.edu/cgi/viewcontent.cgi?article=1611&context=faculty_scholarship.

³⁸ Esther Kaplan, *The Spy Who Fired Me*, HARPER'S MAGAZINE, March 2015, available at <https://harpers.org/archive/2015/03/the-spy-who-fired-me/>.

³⁹ See Peter Cappelli, *Stop Overengineering People Management*, HARVARD BUS. REV., Sept. 2020, available at <https://hbr.org/2020/09/stop-overengineering-people-management> (this occurs where the corporation does not believe it is constrained by a collective bargaining agreement).

⁴⁰ Zickuhr, *supra* n. 11 at 21, *Workplace Surveillance*.

⁴¹ Lisa Kresge, *Union Collective Bargaining Agreement Strategies in Response to Technology*, U.C. BERKELEY L. CTR. (Nov. 2020), <https://laborcenter.berkeley.edu/wp-content/uploads/2022/01/Working-Paper-Union-Collective-Bargaining-Agreement-Strategies-in-Response-to-Technology-v2.pdf>.

⁴² See Charlotte Garden, *Labor Organizing in the Age of Surveillance*, 62 ST. LOUIS U. L. J. 55 (2018), available at <https://digitalcommons.law.seattleu.edu/cgi/viewcontent.cgi?article=1817&context=faculty>.

⁴³ Annette Bernhardt, et al., *Data and Algorithms at Work: The Case for Worker Technology Rights*, U.C. BERKELEY L. CTR. (Nov. 3, 2021), available at <https://laborcenter.berkeley.edu/data-algorithms-at-work/#s-19>; The Daily Podcast, *The Rise of Workplace Surveillance*, N.Y. TIMES, Aug. 24, 2022, available at <https://www.nytimes.com/2022/08/24/podcasts/the-daily/workplace-surveillance-productivity-tracking.html>. See also Nick Stat, *Amazon expands gamification program that encourages warehouse employees to work harder*,

Other forms of AWSM may discourage physical proximity of workers and therefore chill concerted activity. GPS trackers that allow employers to assess worker movements through a warehouse or a janitor's progress in cleaning an office building can also reveal whether groups of workers are exercising their right to discuss conditions or potential unionization. High automated productivity quotas may discourage workers from taking legally permitted breaks where they could have encountered one another in a break room or a restroom. In other cases, worker awareness of corporate surveillance may compel organizing efforts to remain closely held, fostering a sense of wrongdoing when exercising legal rights. "If it's too secret, too confidential, then it starts to feel illicit," notes Saint Louis University School of Law Professor Matthew Bodie. "It's like, oh, we shouldn't be doing this."⁴⁴

4. AWSM combines with other health and safety hazards to amplify unhealthy and unsafe work environments.

AWSM often combines with extant workplace hazards to exacerbate already dangerous working conditions. For example, warehouse workers subject to AWSM-related pressure to increase work speed do so in an environment already rife with multiple health and safety hazards. Workers toil in heat without training to recognize heat stress symptoms; they are exposed to chemicals in plastic with little information about potential health impacts; and they operate machinery with little or no personal protective equipment or training. These hazards, combined with AWSM-related pressure to meet quotas, dramatically increase the likelihood of injury or illnesses.⁴⁵

Significant health and safety hazards are also common in underpaid industries such as warehousing, agriculture, and logistics.⁴⁶ Because of occupational segregation, Black, Latinx, and immigrant workers are overrepresented in these more precarious, underpaid industries, therefore making injury rates higher for workers of color.⁴⁷ Furthermore, hazards caused by increased pace of work quotas and surveillance are rooted in this country's history of slavery, capitalism, and cotton production.⁴⁸ Thus, Black and immigrant workers disproportionately experience the brunt of the legacy of quotas and increased pace of work through their overrepresentation in some of the most precarious industries.

Reliance on AWSM to increase pace of work can undermine worker health and safety.

AWSM poses a risk to workers' health and safety when it is used to increase the pace of work.⁴⁹ For example, regulators have noted that the high rates of serious injury at Amazon are directly attributable to the way that the

THE VERGE, MAR. 15, 2021, available at <https://www.theverge.com/2021/3/15/22331502/amazon-warehouse-gamification-program-expand-fc-games>.

⁴⁴ Constanz, *supra* n. 27, 'They were spying'.

⁴⁵ Warehouse Workers United and Deogracia Cornelio, *Shattered Dreams Broken Bodies: A Brief Review of the Inland Empire Warehouse Industry*, U.C.L.A. LAB. OCCUPATIONAL SAFETY AND HEALTH PROGRAM (June 30, 2011), [https://warehouseworkers.org/wp-content/uploads/2014/06/Shattered Dreams and Broken Bodies718.pdf](https://warehouseworkers.org/wp-content/uploads/2014/06/Shattered-Dreams-and-Broken-Bodies718.pdf).

⁴⁶ U.S. Bureau of Lab. Statistics, *Labor Force Statistics from the Current Population Survey*, U.S. DEP'T OF LAB., available at <https://www.bls.gov/cps/cpsaat18.htm> (showing employed persons by detailed industry, sex, race, and Hispanic or Latino ethnicity), last visited May 25, 2023.

⁴⁷ Kate Bahn and Carmen Sanchez Cummings, *Factsheet: U.S. occupational segregation by race, ethnicity, and gender*, CTR. FOR EQUITABLE GROWTH (July 2020), available at <https://equitablegrowth.org/factsheet-u-s-occupational-segregation-by-race-ethnicity-and-gender/>; Michael Grabell, *The Expendables: How The Temps Who Power Corporate Giants Are Getting Crushed*, PRO PUBLICA, July 13, 2013, available at <https://www.propublica.org/article/the-expendables-how-the-temps-who-power-corporate-giants-are-getting-crushed>; Seth A. Seabury, Sophie Terp, Leslie I. Boden, *Racial and Ethnic Differences in the Frequency of Workplace Injuries and the Prevalence of Work-Related Disability*, 36 HEALTH AFFAIRS No. 2 (Feb. 2017), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6198680/>.

⁴⁸ Nikole Hannah Jones, *1619 Podcast: Episode 2 The Economy That Slavery Built*, N.Y. TIMES, August 30, 2019, available at <https://www.nytimes.com/2019/08/30/podcasts/1619-slavery-cotton-capitalism.html?showTranscript=1>. See also Section 3, *supra*.

⁴⁹ *The Public Health Crisis Hidden in Amazon Warehouses*, HUMAN IMPACT PARTNERS AND WAREHOUSE WORKERS RESOURCE CENTER (Jan. 2021), <https://humanimpact.org/wp-content/uploads/2021/01/The-Public-Health-Crisis->

company manages its workforce using AWSM.⁵⁰ And when Amazon temporarily suspended some of its productivity tracking and disciplinary policies in 2020, injury rates dropped significantly.⁵¹

Meatpacking is another industry that has introduced AWSM in recent years. For example, some of the largest employers in that industry—which have a track record seeking to increase the speed of work even when it endangers the health and safety of frontline workers—have begun to use smart watch technology that “uses sensors to constantly collect data on the force, rotation, speed and directional movement of a worker’s arm as they perform the same motion over and over.”⁵² These watches are marketed by third party vendors as tools to improve worker health and safety; however, they allow employers to much more closely track and surveil worker productivity and pose a potential risk to workers’ health and safety, especially in the absence of regulatory standards limiting their use.

AWSM designed to monitor individual health risks may harm workers and enable discrimination in the absence of guardrails on data collection.

Current evaluation for heat stress, wildfire smoke exposure, and extreme cold exposure for workers is primarily based on broad environmental assessments and does not account for individual physiological responses to these inputs. In response, some health and safety experts have suggested wearable data-collection devices to individually monitor workers for possible illness or injury from exposure to environmental extremes. For instance, Chevron has implemented a skin patch that measures sweat levels and electrolyte loss while other companies are using a third-party sensor that measures heart rate, body temperature, and skin temperature.⁵³ Individual biometric data could allow each worker to assess her own body’s responses in real time and take action to protect herself from illness or injury.⁵⁴ However, without regulation this kind of data collection and surveillance raises significant privacy and potential discrimination concerns.

While manufacturers tout the ability for supervisors to use aggregated data to determine the best times for rest breaks and claim that individualized data is only available to the individual worker, it is unclear how the data

Hidden-In-Amazon-Warehouses-HIP-WWRC-01-21.pdf. See also Jodi Kantor and Arya Sundaram, *The Rise of the Worker Productivity Score*, N.Y. TIMES, Aug. 14, 2022, available at <https://www.nytimes.com/interactive/2022/08/14/business/worker-productivity-tracking.html>.

⁵⁰ Will Evans, *Amazon’s warehouse quotas have been injuring workers for years. Now, officials are taking action*, REVEAL NEWS, May 16, 2022, available at <https://revealnews.org/article/amazons-warehouse-quotas-have-been-injuring-workers-for-years-now-officials-are-taking-action/>.

⁵¹ *Amazon has resumed policies that penalize workers for taking too many breaks, just in time for Prime Day*, CNBC, October 14, 2020, available at <https://www.cnbc.com/2020/10/14/amazon-resumes-policy-that-dings-workers-for-taking-too-many-breaks.html>. See also *The Injury Machine: How Amazon’s Production System Hurts Workers*, THE STRATEGIC ORGANIZING CENTER (April 2022), <https://thesoc.org/wp-content/uploads/2022/04/The-Injury-Machine-How-Amazons-Production-System-Hurts-Workers.pdf>.

⁵² Shayla Thompson and Debbie Berkowitz, *USDA Allows Poultry Plants to Raise Line Speeds Exacerbating Risk of Covid 19 Outbreaks*, NAT’L EMPL. L. PROJECT (June 2020), available at <https://www.nelp.org/publication/usda-allows-poultry-plants-raise-line-speeds-exacerbating-risk-covid-19-outbreaks-injury/>. See also Madison McVan, *JBS, Tyson Foods invest in smartwatch app that monitors workers*, INVESTIGATE MIDWEST, October 13, 2022, available at <https://investigatamidwest.org/2022/10/13/jbs-tyson-foods-invest-in-smartwatch-app-that-monitors-workers/>.

⁵³ *Skin patch could help offshore workers avoid heat stress*, CHEVRON PRESS RELEASE, July 18, 2022, available at <https://www.chevron.com/newsroom/2022/q3/skin-patch-could-help-offshore-workers-avoid-heat-stress>; “Wearable biometric sensor bring better data on heat-related illness in construction,” ENGINEERING NEWS-RECORD, Dec. 29, 2020, available at <https://www.enr.com/articles/50929-wearable-biometric-sensor-brings-better-data-on-heat-related-illness-in-construction>.

⁵⁴ Sean R. Notley, et al., *On the use of wearable physiological monitors to assess heat strain during occupational heat stress*, APPLIED PHYSIOLOGY NUTRITION AND METABOLISM (May 2018), https://www.researchgate.net/profile/Andreas-Flouris/publication/324964363_On_the_use_of_wearable_physiological_monitors_to_assess_heat_strain_during_occupational_heat_stress/links/642bd4cdad9b6d17dc33da45/On-the-use-of-wearable-physiological-monitors-to-assess-heat-strain-during-occupational-heat-stress.pdf.

collection might be regulated or how health information privacy rights like those in the Health Insurance Portability and Accountability Act can be enforced when employers are not subject to the privacy rule. Indeed, in a survey of safety engineers, the most often cited concern with the use of wearable data-collection, evaluation, and performance tracking devices worn by workers, in the workplace was protecting employee privacy and confidentiality. These respondents were concerned that even the *perception* of employer surveillance of such personal data could lead to ineffective use of the wearable devices and intentional lack of compliance by employees.⁵⁵

To date, studies on the efficacy of these types of wearable devices as a health and safety tool have been largely limited to higher income countries and urban settings, occasionally on outdoor workers but often on younger students, athletes, and military enrollees. Significantly, among the studies that were addressing occupational heat stress, several found associations between sex, age, body mass index, and education and physical responses to heat stress.⁵⁶ NELP is concerned that improper use of this data could facilitate discrimination against workers who are perceived to have pre-existing conditions or chronic health conditions or against workers with disabilities; because Black and immigrant workers often have less access to preventive care and experience some chronic health problems at a higher ratio than white workers, this type of health data collection could also have civil rights and Equal Employment Opportunity Commission implications or lead to violations of the Americans with Disabilities Act.⁵⁷

At the same time, it is important for policymakers to recognize that other concerns such as data accuracy, worker access to data, and workplace safety may sometimes overshadow privacy concerns for workers. For example, a recent study showed that during the COVID-19 pandemic many essential workers indicated that health data transparency from their employer was a higher priority for them than their personal health data privacy.⁵⁸

5. AWSM is used to discipline and terminate workers without transparency or meaningful processes to contest decisions, degrading working conditions and potentially amplifying race inequities.

Corporations also use AWSM to discipline or fire workers.⁵⁹ Its use frequently decreases disciplinary transparency and limits workers' access to human managers. For example, Amazon has "replaced its middle management and human resources workers with artificial intelligence to determine when a worker has outlived their usefulness and needs to be let go. There is no human to appeal to..."⁶⁰ Workers have also reported having little recourse when AWSM systems have incorrectly or inaccurately disciplined them.⁶¹

⁵⁵ Mark C. Schall, et al., *Barriers to the Adoption of Wearable Sensors in the Workplace: A Survey of Occupational Safety and Health Professionals*, HUM. FACTORS (May 2018), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9307130/>.

⁵⁶ Mara Koch, et. al., *Wearables for Measuring Health Effects of Climate Change-Induced Weather Extremes: Scoping Review*, JMIR MHEALTH UHEALTH (September 2022), available at <https://mhealth.jmir.org/2022/9/e39532>.

⁵⁷ *Privacy, Data Security, & Workplace Wearables: Best Practices for Employers*, JD SUPRA (January 2022), available at: <https://www.jdsupra.com/legalnews/privacy-data-security-workplace-6466197/>.

⁵⁸ Livia Garofalo, et al., *Essentially Unprotected: Health Data and Surveillance of Essential Workers During the COVID-19 Pandemic*, DATA & SOC'Y (April 2023), available at: <https://datasociety.net/library/essentially-unprotected/>.

⁵⁹ Ugo Okere, et al., *Secure Jobs, Safe Workplaces and Stable Communities: Ending At-Will Employment in Illinois*, NAT'L EMPL. L. PROJECT, RAISE THE FLOOR ALLIANCE, (2021), available at: <https://www.nelp.org/publication/secure-jobs-safe-workplaces-stable-communities-ending-will-employment-illinois/>. See also: Jodi Kantor and Arya Sundaram, *The Rise of the Worker Productivity Score*, N.Y. TIMES, (Aug. 14, 2022), available at: <https://www.nytimes.com/interactive/2022/08/14/business/worker-productivity-tracking.html>, and *Fired by an App*, supra n. 10.

⁶⁰ Jessa Crispin, *Welcome to Dystopia: Getting fired from your job as an Amazon worker by an app*, THE GUARDIAN, July 5, 2021, available at <https://www.theguardian.com/commentisfree/2021/jul/05/amazon-worker-fired-app-dystopia>.

⁶¹ Lauren K. Gurley, *Amazon's AI Cameras Are Punishing Drivers for Mistakes They Didn't Make*, VICE MOTHERBOARD, Sept. 20, 2021, available at: <https://www.vice.com/en/article/88npjv/amazons-ai-cameras-are-punishing-drivers-for-mistakes-they-didnt-make>.

Lack of access to a human manager can adversely affect workers' experience of "organizational justice," or "the role of fairness perceptions, e.g.,...the fairness of decision-making processes, and the fairness in interpersonal interactions." Such experiences can degrade working conditions. Studies have shown that deficits in organizational justice itself can increase job stress and the risk of work-related musculoskeletal disorders.⁶²

Corporate use of AWSM for discipline or termination can also magnify the existing power imbalance between employers and workers, especially in an at-will employment relationship. By providing second-to-second monitoring of workers' actions, surveillance technologies can detect and record a momentary pause on the part of a worker and give employers the option of turning it into an infraction leading to discipline or termination. In this way, AWSM can greatly increase the volume of disciplinary actions, which has the potential to make it much more difficult for workers to contest unfair, discriminatory, or retaliatory disciplinary action or discharges.⁶³

On the surface AWSM can lend the appearance of fairness in workplace discipline by subjecting every worker to a uniform interface with a non-human management system. In reality, aspects of AWSM have the effect of making discipline and firing processes more opaque, arbitrary, and unfair. Workers may have no ability to input or correct data, meaning that the data collected about their work performance may not reflect factors out of their control such as equipment malfunctions or a chance event.⁶⁴ And when workers are disciplined incorrectly or inappropriately by AWSM for circumstances outside of their control, they may have little recourse or access to human decision makers.⁶⁵

Finally, employer adoption of AWSM may also amplify existing inequities in workplace discipline. Research shows that employers scrutinize Black workers more than other workers and are less likely to give Black workers a chance to improve before terminating them.⁶⁶ AWSM may exacerbate those dynamics by providing employers additional inexpensive and non-transparent means to engage in that kind of scrutiny.

6. AWSM facilitates unfair, unpredictable, and discriminatory pay.

As corporations turn to AWSM as a means of managing and controlling their workforces, they are also increasingly relying on algorithms to set wages, in many cases perpetuating wage discrimination based on biased customer reviews or through algorithms that are personalized to individual workers, thereby paying workers unequally for equal work.

For example, ride-hail drivers for corporations like Uber and Lyft are currently paid according to black-box algorithms that are opaque to both workers and consumers. Up until a few years ago, ride-hail companies set customer fares and worker pay with a relatively straightforward calculation, according to a fixed per-minute and

⁶² Raphael M. Herr, et al., *Three job stress models and their relationship with musculoskeletal pain in blue- and white-collar workers*, JOURNAL OF PSYCHOSOMATIC RESEARCH (November 2015), available at: <https://www.sciencedirect.com/science/article/abs/pii/S0022399915005140>.

⁶³ Amazon issued 13,000 disciplinary notices at a single U.S. warehouse, CNBC, July 12, 2022, available at: <https://www.cnn.com/2022/07/12/amazon-issued-13000-disciplinary-notices-at-a-single-us-warehouse.html>.

⁶⁴ Chip Cutter, et al., *You're Working From Home, but Your Company Is Still Watching You*, WALL ST. J., April 18, 2020, available at <https://www.wsj.com/articles/youre-working-from-home-but-your-company-is-still-watching-you-11587202201>.

⁶⁵ Spencer Soper, *Fired by Bot at Amazon: 'It's You Against the Machine'*, BLOOMBERG, June 18, 2021, available at: <https://www.bloomberg.com/news/features/2021-06-28/fired-by-bot-amazon-turns-to-machine-managers-and-workers-are-losing-out>. See also: Lauren K. Gurley, *Amazon's AI Cameras Are Punishing Drivers for Mistakes They Didn't Make*, VICE MOTHERBOARD, Sept. 20, 2021, available at <https://www.vice.com/en/article/88npjv/amazons-ai-cameras-are-punishing-drivers-for-mistakes-they-didnt-make>.

⁶⁶ Costas Cavounidis & Kevin Lang, *Discrimination and Worker Evaluation*, NBER WORKING PAPERS (October 2015), available at <https://www.nber.org/papers/w21612>.

per-mile rate, and then sometimes with “surge” multipliers applied to the total.⁶⁷ Then a couple years ago, Uber fully uncoupled customer fares and worker pay, setting both according to complex and invisible algorithms, meaning that there is no longer any necessary connection between what a customer pays and what a driver is paid.⁶⁸

One result has been a pattern of skyrocketing consumer fares while driver pay continues to fall or stagnate. Another result has been that work as a ride-hail driver—or on-demand work more generally—is increasingly unstable and unpredictable. Workers whose wages are determined by an obscure, complex system may make dramatically different amounts on different days for the same amount of work.⁶⁹ Therefore, corporate adoption of AWSM increases precarity; workers are unable to predict or understand their constantly changing, frequently declining compensation, and many struggle to plan financially.⁷⁰

More troublingly, because driver pay is not fixed according to any set of objective criteria, company algorithms can pay two drivers different amounts for identical trips. A recent video uploaded to YouTube, by the hosts of a popular show about working as a ride-hail driver demonstrates what this looks like in practice: two Uber drivers, sat next to each other on a couch at one of their homes in Chicago, log onto the app at the same time and watch as they are presented identical trips at different fares.⁷¹ Because those algorithms are tightly held, it is currently impossible for anyone outside of Uber to understand what determines the different fares. But, as one scholar exploring this issue has put it, it seems highly likely that on-demand companies like Uber are “offer[ing] vulnerable workers lower wages based on their willingness to accept work at lower prices.”⁷² In other words, AWSM threatens to pave the way for a new labor management practice: using individualized worker data to identify exactly the wage at which a given worker will accept work, and then paying them that amount. The upshot is that poor workers, Black workers, immigrant workers, and women workers may be paid less for doing equal work.

And by no means are these trends limited only to ride-hail workers. As companies in industries like retail, food service, and medical care adopt the labor management technologies pioneered by Uber, the practice of algorithmic wage discrimination is spreading.⁷³ For example, a company that has branded itself “Uber for Hospitals” has developed AI staffing software that uses “smart technology” to allocate work tasks and to judge the performance of porters, nurses, and nurse practitioners. The technology company’s “performance analysis” is then used to determine the pay for these healthcare workers.⁷⁴ Absent strong policy interventions, workers

⁶⁷ Dara Kerr, *Secretive Algorithm Will Now Determine Uber Driver Pay in Many Cities*, MARKUP, Mar 1, 2022, available at <https://themarkup.org/working-for-an-algorithm/2022/03/01/secretive-algorithm-will-now-determine-uber-driver-pay-in-many-cities>.

⁶⁸ Faiz Siddiqui, *You May Be Paying More for Uber, but Drivers Aren't Getting their Cut of the Fare Hike*, WASH. POST, Jun. 10, 2021, available at <https://themarkup.org/working-for-an-algorithm/2022/03/01/secretive-algorithm-will-now-determine-uber-driver-pay-in-many-cities>.

⁶⁹ Veena Dubal, *On Algorithmic Wage Discrimination*, U.C. SAN FRANCISCO RESEARCH PAPER at 14 (forthcoming 2023), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4331080.

⁷⁰ *Id.* at 7.

⁷¹ *2 Uber Drivers: Same Requests DIFFERENT PAY! You Won't Believe This!*, THE RIDESHARE GUY YOUTUBE CHANNEL (Mar 1, 2023), available at <https://www.youtube.com/watch?v=UADTiL3S67I>.

⁷² Dubal, *supra* n. 69, at 40 (“As a labor management practice, algorithmic wage discrimination allows firms to personalize and differentiate wages for workers in ways unknown to them, paying them to behave in ways that the firm desires, perhaps as little as the system determines that they may be willing to accept.”); *Id.* at 6.

⁷³ See, e.g., Lauren K. Gurley, *Target's Delivery App Workers to Be Paid by a Blackbox Algorithm Nationwide*, VICE, Sept. 11, 2020, available at <https://www.vice.com/en/article/qj49jv/targets-delivery-app-workers-to-be-paid-by-a-blackbox-algorith>. See also E. Tammy Kim, *The Gig Economy is Coming for Your Job*, N.Y. TIMES, Jan. 10, 2020, available at <https://www.nytimes.com/2020/01/10/opinion/sunday/gig-economy-unemployment-automation.html>.

⁷⁴ For more information on this company, see Nicky Godding, *Oxford Tech Raises £9 Million for 'Uber for Hospitals' AI Platform*, BUSINESS INNOVATION MAGAZINE, May 21, 2020, available at <https://www.businessinnovationmag.co.uk/oxford-tech-raises-9-million-foruber-for-hospitals-ai-platform/>.

across the economy could be paid according to opaque and personalized algorithms that obscure systemic wage discrimination along protected lines of race and gender.⁷⁵

7. Policy recommendations to address the harms of unregulated corporate adoption of AWSM.

As detailed above, corporate adoption of AWSM is creating new barriers to employment (both finding and keeping jobs), employer accountability, workplace democracy, health and safety, and fair compensation, particularly for Black, immigrant, and women workers. Mitigating the risks and harms posed by corporate AWSM practices will require deliberate worker engagement, ongoing evaluation, updates to administrative policies and legislation, and significant investments in enforcement.

1. *The Administration should support policies that expand worker voice and worker power, which are fundamental to eliminating the harmful effects of AWSM.*

Workers must have a voice in the adoption of AWSM at work and play a central role in evaluating its use. They should have institutional power to develop and enforce policies that eliminate or minimize the AWSM's harmful impacts.

- The Bureau of Labor Statistics (BLS) should develop a new Current Population Survey (CPS) module asking workers how AWSM impacts their employment and job quality.
 - Unions provide workers with a voice on the use of AWSM by their employers.⁷⁶ Recognizing this, the White House should work with Congress to advance the Protecting the Right to Organize Act to expand organizing and collective bargaining protections. Workers should be able to bargain freely over the adoption, use, limitations of, as well as protections from, AWSM in any contract.
 - To help ensure AWSM is not used to silence organizing, the NLRB should formally adopt the framework established by the General Counsel's memo on unlawful electronic surveillance and automated management practices. Specifically, the Board should adopt a presumption that the use of AWSM is a violation of privacy and of the right to organize, absent compelling justification.⁷⁷
 - The Administration or the NLRB should consider adopting rules to require employee consent to electronic surveillance and can look to state law models.⁷⁸
2. *The Administration should establish ongoing evaluation on corporate use of AWSM.*

Given the skyrocketing, opaque, and largely unregulated adoption of AWSM, the Administration should develop policies and procedures to ensure regular and transparent evaluation of its impact on workers.

- The BLS should field the CPS module mentioned above regularly to ensure that the Department of Labor (DOL) and worker advocates stay abreast of AWSM impacts on workers.
- To account for the fact that workers may not be privy to the extent of their employers' use of AWSM, the Administration should work with the BLS, the DOL Inspector General, and the Commerce Department to survey and audit businesses regarding their adoption and use of AWSM. Following the examples of some states, the Administration should explore requiring regular and public disclosure of what information is

⁷⁵ Teachout, *supra* n. 9, *Algorithmic Personalized Wages* (“Uber drivers’ experiences [of wage discrimination] should be understood not as a unique feature of contract work, but as a preview of a new form of wage setting for large employers: individualized pay, schedules, benefits, and individualized behaviorally based incentive structures.”).

⁷⁶ Kresge, *Union Collective Bargaining*, *supra* n. 41.

⁷⁷ See NAT’L. LAB. REL. BD. memo, *supra* n. 25, at 8.

⁷⁸ See, e.g., California law rendering it a misdemeanor to use electronic tracking of an employee without her consent. Kendra Rosenberg, *Location Surveillance by GPS: Balancing an Employer’s Business Interest with Employee Privacy*, 6 WASH. J. L. TECH. & ARTS 143, 149 (2010).

collected, where it is stored and for how long, how it is used, and if it is shared.⁷⁹ Relatedly, because AWSM is currently developed and implemented largely in secret, robust worker notice and transparency measures should be developed.⁸⁰

- The White House should work with the Commerce Department to examine the patenting process and to ensure that the worker impact assessments are incorporated.
 - The Administration should work to ensure that patents for technologies with workplace applications ensure jobs aligned with the DOL's Good Job Principles.
3. *The Administration should establish a Privacy and Technology Division at the DOL to help protect workers from the harms of AWSM.*

NELP supports the proposal put forth in the Stop Spying Bosses Act of 2023 (S. 262) to establish a Privacy and Technology Division at the Department of Labor to enforce and regulate workplace surveillance, with annual reporting to Congress on workplace surveillance and employer actions to control workers, including how and to what extent AWSM systems harm workers.⁸¹ The White House should work with Congress to advance this legislation which would additionally require any employer engaging in surveillance and collecting data on employees or applicants to disclose such information in a timely and public manner; prohibit employers from collecting sensitive data on workers such as off-duty data collection or data collection that interferes with organizing; and create robust rules around the usage of automated decision systems.

4. *The Administration should issue guidance and invest in enforcement to eliminate the use of AWSM as a tool for evading employer accountability.*

Many of the harms inflicted by widespread corporate adoption of AWSM are the result of the way AWSM enables the violations of other laws, particularly how it helps strip workers of core employee and labor protections. Accordingly, NELP recommends that the Administration use its existing authority to promulgate guidance and use strategic enforcement to protect and restore employee rights. NELP recommends the following:

- The DOL's proposed rule on independent contractor classification under the Fair Labor Standards Act (FLSA) should be finally promulgated to ensure broad access to minimum wage and overtime protections Congress intended under the FLSA. The DOL's express consideration of surveillance and technology should be retained and strengthened in the final rule to specifically identify *algorithmic control* as a form of technological control weighing in favor of employee status. The rule should recognize that control over the work, even if exercised by algorithmic management on a smartphone or electronic surveillance, is probative evidence of an employment relationship.
- The DOL should issue guidance clarifying what constitutes "compensable time" for individuals working on labor platforms that currently use AWSM to deny pay for a significant portion of workers' time, such as when a ride-hail driver is returning from a drop off or waiting for a passenger.⁸²
- The NLRB's rulemaking to restore "joint employer" accountability under the NLRA should address the role of AWSM in preventing or chilling worker organizing. It should recognize the use of AWSM as an indicator of an employment relationship and restore accountability for labor law violations by corporations—like Amazon—that use AWSM to control their subcontractors and workers throughout

⁷⁹ Connecticut and Delaware both require disclosure to employees of surveillance practices. See Conn. Gen. Stat. § 31-48d(b)(1); Del. Code Ann. tit. 19, § 705.

⁸⁰ See Emlyn Brottomley, *Data and Algorithms in the Workplace: An Overview of Current Public Policy Strategies*, U.C. BERKELEY L. CTR. (Nov. 17, 2020), available at <https://escholarship.org/content/qt14c251kn/qt14c251kn.pdf?t=rq6hdy>.

⁸¹ *Stop Spying Bosses Act*, US Senate, S. 262, Senate Committee on Health, Education, Labor, and Pensions, available at: <https://www.congress.gov/bill/118th-congress/senate-bill/262/text>.

⁸² See, e.g., Rebecca Bellan, *U.C. Berkeley finds gig workers could earn \$4.82 per hour if MA ballot proposal passes*, TECH CRUNCH, Sept. 29, 2021, available at <https://techcrunch.com/2021/09/29/uc-berkeley-finds-gig-workers-could-earn-4-82-per-hour-if-ma-ballot-proposal-passes/> (noting that 'engaged time' is only 67% of actual work time).

their fissured workforce. Specifically, the Board should clarify that employers' use of AWSM is indicia of an employer's "authority to control" and suggests direct or indirect "power to control" under the NLRA.

5. *The Administration should establish standards for disciplinary transparency and fairness for federal contractors using AWSM.*

The enormous power of AWSM should be decoupled to the greatest extent possible from the processes of workplace discipline and termination to guard against abuses and reduce the increased power imbalance between workers and employers. Curbing the use of AWSM for the purposes of discipline and termination, together with greater protection against abrupt and arbitrary firings, would help diminish harm to workers and the erosion of job quality. The Administration should, at a minimum, begin this work with its federal contractors, by implementing the following standards:

- Federal contractors should be prohibited from using the most invasive forms of AWSM (such as biometric monitoring or apps installed on personal devices) for the purposes of discipline and termination. These employers should also be required to meet standards of fairness and transparency when using AWSM to discipline or terminate workers. Such standards could include requiring employers to use the least invasive surveillance method available and to provide justification and third-party certification for any surveillance they plan to use for the purposes of discipline or termination. These provisions are included in a bill recently introduced in the New York City Council.⁸³
- Federal contractors' use of electronic monitoring in relation to productivity tracking and pace of work should be restricted. Measures could include, for example: banning continual "time off task monitoring" allowing it only as part of a periodic pre-announced performance review;⁸⁴ and limiting the time increments in which quotas can be measured, i.e., allowing for quotas to be measured by the day, and not by shorter increments of time such as the hour or minute.
- The Administration should require federal contractor disclosure of performance standards and fair processes for discipline and termination. Any attempt to regulate the use of electronic monitoring will have a limited effect in the absence of baseline legal protections related to discipline and termination. For example, policies that require disclosure of AWSM use, access to data collected by AWSM, or that impose broad blanket bans on AWSM (such as the proposed Stop Spying Bosses Act of 2023—S. 262 that bans surveillance that threatens employees' mental or physical health) will be less effective in an at-will employment context. If enacted in the absence of required disclosure of performance standards, disciplinary policies, warnings, fair processes, and reasons for discharge, employers will continue to use AWSM in opaque ways that leave workers little recourse when they are unfairly discharged based on data from AWSM. As such, the Administration should consider establishing "just cause" protections for all employees of federal contractors.⁸⁵ The Administration should consider how best to expand these federal policies to the private sector in keeping with its Good Jobs Principles and for the benefit of all workers.

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As detailed above, NELP is concerned with unregulated and opaque corporate adoption of AWSM and its impacts on employment, compensation, health and safety, discrimination, and worker power, particularly for Black and immigrant workers. Corporate adoption of AWSM without worker input, voice, transparency, and evaluation threatens to erode employer accountability, increase barriers to collective action, amplify unsafe or unhealthy working conditions, facilitate unpredictable and discriminatory pay, increase racial income inequality, and leave

⁸³ *Wrongful Discharge from Employment*, N.Y. City Council, Int. 0837-2022, Committee on Consumer and Worker Protection, available at <https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=5958217&GUID=44D72CEC-FE82-4A43-BA31-4BB15FBC15EB&Options=ID%7CText%7C&Search=s%3D%3D>.

⁸⁴ *Id.*

⁸⁵ Karla Walter, *Service Contract Workers Deserve Good Jobs*, CTR. FOR AM. PROGRESS, (Apr. 9, 2021), available at <https://www.americanprogressaction.org/article/service-contract-workers-deserve-good-jobs/>.

workers without recourse for unfair and opaque discipline or termination. NELP appreciates the opportunity to comment on this important topic.

Sincerely,

Anastasia Christman, Senior Policy Analyst
Sally Dworak-Fisher, Senior Staff Attorney
Nicole Marquez, Director of Social Insurance
Daniel Ocampo, Legal Fellow
Maya Pinto, Senior Researcher and Policy Analyst
Irene Tung, Senior Researcher and Policy Analyst