

**DATA &
SOCIETY**

**Digital Barriers to
Economic Justice in
the Wake of COVID-19**

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Executive Summary

This primer highlights major barriers to economic justice created or magnified by data-centric technologies in the wake of the coronavirus pandemic. Specifically, there are three major trends related to data-centric technologies that are undermining the current and future economic stability for marginalized communities:

- 1) Collapse of benefits automation
- 2) Expanded surveillance
- 3) Digital profiling of economic distress

To our knowledge, there has been little discussion of how these trends will heighten existing economic inequalities as the nation attempts to rebuild post-pandemic. We aim to fill this gap through a conception of **data justice**, in which technology serves to empower people rather than to oppress them. Further, we provide suggestions for reform so that technology works for people, rather than against them, as the nation emerges from the grip of the pandemic.

Broadly, our recommendations all follow from five underlying values:

- 1) **Institutions, rather than individuals**, should bear greater responsibility to assess and limit the potentially harmful impact of algorithmic decision-making systems on racial and economic inequality before they are deployed.
- 2) **Stakeholder participation** should be encouraged and sustained throughout the technology development, procurement, and implementation lifecycle.
- 3) **Transparency and accountability** should be elevated as essential requirements of any algorithmic system that determines the distribution of public benefits or access to essential life needs, such as employment, housing, health care, or education.

- 4) **Digital markers of economic hardship** should receive added scrutiny in any algorithmic decision-making system. In particular, pandemic-related debts and evictions, and any penalties associated with unequal surveillance in education and workplace settings should be expunged from digital profiles whenever possible.
- 5) **Technology design and access** should take into account the diverse interests, needs, and experiences of users, and center their voices in various stages of the design process.

Ultimately, a newer round of critical, algorithmic appraisal is needed—one that considers whether certain kinds of algorithmic systems should be deployed at all and who gets to decide. These queries inevitably lead to the issue of refusal: What data-centric practices should be eliminated altogether? To this question, we offer an answer: If technology is not advancing the racial and economic justice of all Americans, it requires regulation, retooling, or retirement.

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Introduction

This primer highlights major barriers to economic justice created or magnified by data-centric technologies in the wake of the coronavirus pandemic. The pandemic has already heightened long-standing social inequalities: Poor people as well as people who are Black, Latinx, and Native American are sicker and face higher rates of mortality due in part to inadequate medical care,¹ are more often limited to front-line jobs that expose them to the virus, and have less access to the financial resources or workplace benefits that enable them to retain employment while they care for loved ones, weather layoffs, or bear the brunt of a flattened economy.

Even when the public health crisis abates, the negative economic impact of the pandemic is expected to linger. And the increased reliance on digital profiling and algorithmic decision-making in key commercial and governmental sectors threatens to extend this impact in ways that exacerbate economic injustice for millions of Americans. Without policy reforms and other safeguards in place, digital evidence of financial distress and punitive measures associated with educational or workplace surveillance will make economic recovery for low-income people and people of color far more difficult, thereby dealing yet another blow to those who were most deeply affected by the pandemic.

Consider the situation facing Alicia, a single mother of a 10-year-old son.² In March 2020, at the start of the pandemic, she was laid off from her job as a hotel housekeeper. She quickly fell behind on her rent and utilities. She attempted to

1 There are multiple social determinants that contribute to the increased COVID-19 health risks faced by racial and ethnic minority groups, see Centers for Disease Control, “Health Equity Considerations & Racial & Ethnic Minority Groups,” COVID-19, Feb. 12, 2021, <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html>.

2 “Alicia” is a pseudonym for a composite of low-income people impacted by the pandemic. The lead author represents a range of low-income clients through her role as the director of the Saul Ewing Civil Advocacy Clinic at the University of Baltimore School of Law.

apply for unemployment insurance, but was not sure if her application was received after the state's online application system repeatedly froze or crashed during the process. By August, her landlord had sued her for failing to pay rent. She was able to stay in her home due to state and federal eviction moratoriums, yet her outstanding rent continued to accrue, and the moratoriums provided only temporary protection. Her mounting and unpaid bills lowered her credit score, and her landlord's lawsuit against her was digitally scraped by tenant-screening companies, thereby affecting her future ability to move. Meanwhile, her 10-year-old son was attending school online, but unreliable internet service meant that he struggled to stay connected to the class. In December, Alicia was able to obtain some part-time work, but was soon laid off after her company's newly implemented social distancing tracking system wrongly suggested she was to blame when customers repeatedly came too close to her when she was restocking shelves.

Alicia's story reflects three major trends related to data-centric technologies that are undermining the current and future economic stability for marginalized communities:

(1) Collapse of Benefits Automation. At a time of unprecedented need, the patchwork of digital infrastructure supporting the administration of the social safety net proved to be woefully insufficient. The pandemic strained systems that were already burdensome for disadvantaged groups. Some government agencies embraced untested solutions with hastily integrated products, while others struggled with outdated legacy systems that could not handle the crush of demand. Most notably, state computer systems processing unemployment insurance applications were unable to handle the massive volume, with the result that millions of eligible people were denied financial benefits necessary to meet basic household needs.

(2) Expanded Surveillance. At work and in schools, surveillance infrastructure expanded in ways that echo the historically disparate practices of subjecting marginalized communities to higher levels of monitoring and associated disciplinary measures. Health-related surveillance and testing became a prerequisite for physical presence in classrooms and workplaces, placing a greater burden on low-income people, who were among the first to return to school and work in

person. Many people who could work or learn at home became subject to new digital monitoring and proctoring tools that deepened the fault lines of inequality.

(3) Digital Profiling of Economic Distress. The markers of economic distress, such as evictions, unpaid credit cards, and shut-off utilities, are becoming permanently embedded in people's digital profiles. In turn, this digital profiling limits the ability of many people to gain their financial footing, as lenders, employers, landlords, and other entities penalize people based on their digital footprints and deny them access to basic goods, services, and opportunities for financial stability. At the same time, digital profiling that identifies people as struggling to make ends meet makes them more likely to be targets for predatory financial products and marketing scams.

These three trends provide timely and critical counter-narratives to current discussions at the intersection of the pandemic and technology. In the early days of the pandemic, tech companies and governments proposed digital contact tracing through smartphones as a key strategy for limiting the virus's spread. Civil libertarians and privacy advocates immediately critiqued the potential of these tools to not only compromise one's health-related privacy, but also to extend governmental surveillance long beyond the pandemic. Ultimately, digital contact tracing in the United States never took off as a public health tool and remains limited in scope and effect.

However, other technologies, receiving far less scrutiny, are normalizing inequalities in digital tracking, surveillance, and harmful social sorting. Certain data practices are excluding low-income people from economic support and social services, while others are targeting them based on their precarious economic status and trapping them in cycles of poverty. To our knowledge, there has been little discussion of how these data-centric technologies heighten existing economic inequalities as the nation attempts to rebuild post-pandemic. We aim to fill this gap through a conception of data justice, in which technology serves to empower people rather than to oppress them. Further, we provide suggestions for reform so that technology works for people, rather than against them, as the nation emerges from the grips of the pandemic.

Even before the pandemic, the privacy landscape for people experiencing poverty was bleak. In the U.S., income inequality has been deeply intertwined with the history of state-sanctioned racial injustice and differential surveillance. Low-income and minority communities have historically been given less privacy and have been unjustly surveilled in ways that white and more affluent people have not.³ For centuries, the state and private entities with the backing of the state stripped privacy from people on the basis of race, gender and economic status in order to stigmatize them, extract their labor, and change their behavior. Today, data-centric technologies add scope, speed, and scale to these long-standing dynamics.⁴ Layered on top of the government's data surveillance infrastructure, private companies generate immense profits from collecting, analyzing, and selling people's personal data. Simultaneously, the lines between the state and private enterprise are blurred, as they sell and share their data troves via interconnected networks and as governments purchase algorithmic decision-making tools from private vendors. To be sure, all Americans are subject to these big data practices; however, groups that have been historically targeted by state-sanctioned surveillance and monitoring face harsher consequences from the datafied society because algorithms increasingly serve as primary and unaccountable gatekeepers to life's necessities, such as education, jobs and housing. Not surprisingly, low-income people report higher levels of concern over their online privacy, but lower levels of confidence in their ability to manage it.⁵ As this report explains, the pandemic has magnified these dynamics in ways that will outlive the public health crisis.

Economic Justice Requires Data Justice

The pandemic is exacerbating existing patterns of economic injustice and creating new ones. As data-centric technologies become increasingly interwoven in daily life, scholars in a variety of fields have crafted working definitions of *data justice*. They share the insight that big data analytics occur in and reinforce

3 Simone Browne, *Dark Matters: On the Surveillance of Blackness* (Duke U. Press, 2015); Mary Madden, Michele Gilman, Karen Levy & Alice Marwick, "Privacy, Poverty and Big Data: A Matrix of Vulnerabilities for Poor Americans," *Washington U. L. Rev.* 95 (2017): 53.

4 Michele Gilman, "Five Privacy Principles (from the GDPR) the United States Should Adopt to Advance Economic Justice," 52 *Arizona State Law Journal* (2020): 368.

5 Mary Madden, "Privacy, Security, and Digital Inequality," *Data & Society* (Sept. 27, 2017) <https://datasociety.net/survey-research-low-ses-populations/>.

relationships of unequal power. Professor Linnet Taylor envisions three pillars of data justice: *in/visibility*, or the ability to be both represented in data and maintain control over data privacy; *autonomy* to engage or disengage in data markets; and *non-discrimination* in algorithmic outputs.⁶ Taylor writes that “the central question” of data justice is “how to balance and integrate the need to be seen and represented appropriately with the needs for autonomy and integrity.” The trends outlined in this report are barriers to this vision of data justice, which we argue is inextricably linked to economic and racial justice—particularly for the poor.

In America, Black, Latinx, Indigenous, and other people of color are frequently excluded from accessing the same levels of income, wealth and social mobility than white Americans do. They disproportionately live in material hardship, the result of both historical and ongoing oppression and exclusion despite living in a country with vast wealth. This runs counter to the vision of economic justice, which is about ensuring “that everyone has access to the material resources that create opportunities, in order to live a life unencumbered by pressing economic concerns.”⁷ These disparities, born from racial injustice, also further undermine the goals of racial justice, which aims for the fair treatment of all racial groups through non-discrimination as well as proactive and deliberate policies that result “in equitable opportunities and outcomes for all.”⁸ The data-centric technologies highlighted in this report are depressing economic stability and security, particularly for people of color. While this report primarily focuses on the economic impact of data-centric technologies, it reveals many links between big data, economics, and race, in order to more fully articulate a social justice agenda that serves all Americans.

6 Linnet Taylor, “What Is Data Justice? The Case for Connecting Digital Rights and Freedoms Globally.” *Big Data & Society*, (November 1, 2017): 8 <https://doi.org/10.1177/2053951717736335>.

7 Sandro Galea, “On Economic Justice,” *School of Public Health, Boston University*, (Jan. 29, 2017). <https://www.bu.edu/sph/2017/01/29/on-economic-justice/>.

8 Racial Equity Tools, Glossary, www.racialequitytools.org/glossary#racial-justice.

PART ONE: Collapse of Benefits Automation and Unaccountable Decision-Making During the Pandemic

The pandemic led to a peak unemployment rate of 14.8% in April 2020, the highest rate since government data collection started in 1948.⁹ More than one million workers applied for unemployment insurance in each week after the pandemic started through March 2021.¹⁰ A massive demand for governmental assistance resulted. Automated public benefits systems were overwhelmed, leaving millions of eligible workers without financial support and creating ripple effects throughout the economy as people were unable to pay their rent and mortgages, buy food, or cover their bills.¹¹

The government relies on technology to administer public benefits programs, promising cost savings and increased efficiencies to citizens as compared to reliance on human caseworkers. Yet, as Virginia Eubanks has explained, these algorithmic decision-making systems encode and mask moralistic and punitive notions about poor people, with life and death impact when access to benefits is delayed or denied.¹²

In 2019, the UN Special Rapporteur on Extreme Poverty and Human Rights warned that nations, including the United States, were stumbling “zombie-like

9 Congressional Research Service, *Unemployment Rates During the COVID-19 Pandemic: In Brief*, Jan. 12, 2021, <https://fas.org/sgp/crs/misc/R46554.pdf>.

10 Brian Galle, Elizabeth Pancotti & Andrew Stettner, “Expert Q&A About the Unemployment Provisions of the American Rescue Plan,” The Century Foundation, March 10, 2021, <https://tcf.org/content/commentary/questions-answers-unemployment-provisions-america-rescue-plan-act/?agreed=1>.

11 Center on Budget and Policy Priorities, “Tracking the COVID-19 Recession’s Effects of Food, Housing, and Employment Hardships,” <https://www.cbpp.org/research/poverty-and-inequality/tracking-the-covid-19-recessions-effects-on-food-housing-and>.

12 Virginia Eubanks, *Automating Inequality: How High Tech Tools Profile, Police, and Punish the Poor* (St. Martin’s Press, 2018).

into a digital welfare dystopia,” in which automated systems are used to “surveil, target, harass, and punish beneficiaries,” while leaving people unable to negotiate complex computational systems or obtain redress for errors and inequities.¹³ Unfortunately, these warnings proved prescient, as the pandemic exacerbated many of these existing patterns of unfair, biased, erroneous, opaque, and unaccountable decision-making.

The most grievous failures happened with regard to unemployment insurance (UI) benefits, which are designed to replace wages when workers lose their jobs and are looking for work. In a three-week period in March and April of 2020, more than 10% of the workforce filed for unemployment insurance.¹⁴ Throughout the pandemic, the highest rates of unemployment were among “young workers, women, workers with low educational attainment, part-time workers, and racial and ethnic minorities.”¹⁵ These workers also disproportionately faced structural and systematic barriers to obtaining UI benefits.

UI benefits are funded by employer-paid taxes and administered by the states, subject to federal oversight. Although state policies vary, UI generally provides for up to 26 weeks of benefits, replacing about half of a worker’s previous, regular wages. The CARES Act, enacted in March 2020 to provide pandemic relief, expanded UI eligibility to self-employed people and part-time workers; extended the time period for assistance; and provided an extra \$600 per week through July 31, 2020. The American Rescue Plan, enacted in March 2021, further extended the time period for these programs, with a \$300 per week supplemental benefit.

13 United Nations Human Rights Office of the High Commissioner, “World Stumbling Zombie-like into a Digital Welfare Dystopia, Warns UN Human Rights Expert.” <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25156>.

14 Julia Simon-Mishel, Maurice Emsellem, Michele Evermore, Ellen Leclere, Andrew Stettner & Martha Coven, “Centering Workers—How to Modernize Unemployment Insurance Technology,” The Century Foundation (Oct. 5, 2020), 3, <https://tcf.org/content/report/centering-workers-how-to-modernize-unemployment-insurance-technology/>.

15 Congressional Research Service, Unemployment Rates During the COVID-19 Pandemic: In Brief, Jan. 12, 2021, <https://fas.org/sgp/crs/misc/R46554.pdf>.

However, from the start of the pandemic, many automated UI systems across the country were unable to deliver on the CARES Act’s promised relief.¹⁶ For months, the news media was awash with nightmarish stories from applicants struggling to obtain their UI benefits online. The newly unemployed described UI application websites that froze; that crashed; that flashed error messages; that went offline at random hours. Thousands of people were locked out of their accounts due to password reset issues;¹⁷ these frustrated applicants then overwhelmed call centers. When claimants could finally access a website, many found errors embedded in their digital records that were nearly impossible to fix.

In some states, web-based application systems were not compatible with mobile phones, which low-income people are more likely to possess and use than computers.¹⁸ Further, locations that low-income people previously relied on for computer access, such as libraries and community centers, were shut down during the pandemic. The digital divide—with persistent gaps in broadband coverage for rural, Black, Latinx, Native Americans living on reservations, and older people—was inescapable.¹⁹ Automated phone-based systems fared no better. Callers were waiting six to eight hours to file an application; or calling hundreds—even thousands—of times a day hoping to get past a busy signal; or becoming disconnected after hours on hold. At one point in Wisconsin, only 1% of callers to the state’s UI agency were able to get through to a caseworker.²⁰

16 Colin Lecher, “How Unemployment Systems Are Failing Workers Around the Nation,” *The Markup*, July 16, 2020, <https://themarkup.org/coronavirus/2020/05/07/how-unemployment-systems-are-failing-workers-around-the-nation>.

17 “Centering Workers,” at 16.

18 “Centering Workers,” at 3 (“While more than 80 percent of white adults report owning a desktop or laptop, fewer than 60 percent of Black and Latinx adults do.”); Center on Budget and Policy Priorities. “Leveraging Text Messaging to Improve Communications in Safety Net Programs,” May 8, 2019, <https://www.cbpp.org/research/poverty-and-inequality/leveraging-text-messaging-to-improve-communications-in-safety-net>.

19 Eileen Guo, “Getting Vaccinated is Hard. It’s Even Harder Without the Internet,” *MIT Tech. Review*, Feb. 3, 2021, <https://www.technologyreview.com/2021/02/03/1017245/broadband-digital-divide-senior-citizens-pandemic/>.

20 Molly Beck, “Less than 1% of Calls to State Unemployment Call Centers Were Answered, Audit Shows,” *Milwaukee Journal Sentinel*, Sept. 25, 2020, <https://www.jsonline.com/story/news/politics/2020/09/25/less-than-1-calls-unemployment-call-centers-were-answered/3529690001/>.

Moreover, many states that previously permitted people to apply for benefits in person shut down their offices due to the public health risks, thereby exacerbating the consequences of the digital divide. This infrastructural inequality had consequences. All told, one study found that over a third of UI applicants were unable to file a claim and that 2 out of 10 found the systems too complicated to make an attempt.²¹ By the end of May—two months into the pandemic—only 57% of claims had been paid,²² and millions waited for months to get their benefits.²³ Lacking UI benefits, workers turned to food banks, missed payments on their credit cards and other bills, and some became homeless. Thousands flocked to Reddit boards to find community support and advice for cutting through their state’s technological red tape,²⁴ and mutual aid networks coordinated to provide support.²⁵

How did this collapse happen? Early narratives blamed antiquated systems running on the COBOL programming language, which was developed in the 1950s. The governor of New Jersey made a public plea for COBOL programmers to come out of retirement to help fix the system. However, as Mar Hicks, a historian of technology, explained, this COBOL-defense was a myth.²⁶ There are ample programmers who know COBOL. The real problem was that the federal government and states have underinvested in the staff to maintain their systems. Indeed, some states, including Pennsylvania and Georgia, employ half the number of UI employees than they did during the Great Recession, which was the last time in which UI systems faced intense demand.²⁷

21 Economic Policy Institute, “Unemployment Filing Failures: New Survey Confirms That Millions of Jobless Were Unable to File an Unemployment Insurance Claim,” April 28, 2020, <https://www.epi.org/blog/unemployment-filing-failures-new-survey-confirms-that-millions-of-jobless-were-unable-to-file-an-unemployment-insurance-claim/>.

22 Eli Rosenberg, “Workers Are Pushed to the Brink as They Continue to Wait for Delayed Unemployment Payments,” *Washington Post*, July 13, 2020, <https://www.washingtonpost.com/business/2020/07/13/unemployment-payment-delays/>.

23 Greg Iacurci, “The ‘Black Hole’ of Unemployment Benefits: Six Months into the Pandemic, Some are Still Waiting for Aid,” *CNBC*, Sept. 27, 2020, <https://www.cnbc.com/2020/09/27/why-some-states-are-struggling-to-pay-unemployment-benefits.html>.

24 Bridget Read, “On r/Unemployment, Desperate People Seek Unemployment Help,” *The Cut*, Sept. 25, 2020, <https://www.thecut.com/2020/09/reddit-unemployment-community-covid.html>.

25 Kimiko de Freytas-Tamura, “How Neighborhood Groups Are Stepping In Where the Government Didn’t,” *New York Times*, Mar. 6, 2021, <https://www.nytimes.com/2021/03/03/nyregion/covid-19-mutual-aid-nyc.html>.

26 Mar Hicks, “Built to Last,” *Logic*, Aug. 31, 2020, <https://logicmag.io/care/built-to-last/>.

27 Jed Pressgrove, “Staffing Issues Complicate Unemployment Agency Tech Woes,” *Governing*, May 27, 2020, <https://www.governing.com/work/Staffing-Issues-Complicate-Unemployment-Agency-Tech-Woes.html>.

Underinvestment plagues the UI system overall.²⁸ In the past 20 years, federal administrative funding has declined.²⁹ Further, during the Great Recession, many states were forced to take out federal loans when their UI trust funds ran dry. Then, as they emerged from the recession, states had to repay the loans.³⁰ Instead of raising the taxes on employers, many states simply limited benefits eligibility and cut the amount of benefits available to the unemployed.

Florida is one such example. The state was processing only 10% to 15% of UI applications during the peak of pandemic-related unemployment. An aide to Governor Ron DeSantis admitted that the prior administration designed the UI system to “make it harder for people to get benefits” and to keep unemployment numbers low in order “to give the governor something to brag about.”³¹ This admission reinforces the conclusion of Pamela Herd, a professor of public policy at Georgetown University, that the UI collapse resulted from conscious design and disinvestment choices. Even states that did not intend to cut the rolls nevertheless made conscious decisions about how and whether to support these systems.

One of those state choices is to rely extensively on automation. Yet studies show that increased automation results in a decrease in UI applications and lower levels of benefit receipt.³² This is largely due to the phenomenon of “bureaucratic disentanglement,” or placing procedural barriers in the way of claimants to discourage them from applying, and if they survive the application gauntlet, to increase the numbers of denials. Recent analysis suggests that automation has doubled the number of UI denials due to procedural failures in the filing process.³³

28 *Centering Workers*, at 8.

29 National Employment Law Project, “From Disrepair to Transformation: How to Revive Unemployment Insurance Information Technology and Infrastructure,” July 15, 2020, <https://www.nelp.org/publication/from-disrepair-to-transformation-how-to-revive-unemployment-insurance-information-technology-infrastructure/>.

30 George Wentworth, “Closing Doors on the Unemployed: Why Most Jobless Workers Are Not Receiving Unemployment Insurance and What States Can Do About It,” *National Employment Law Project*, https://s27147.pcdn.co/wp-content/uploads/Closing-Doors-on-the-Unemployed12_19_17-1.pdf.

31 Gary Fineout and Marc Caputo, “‘It’s a sh-- sandwich’: Republicans rage as Florida becomes a nightmare for Trump,” *Politico Florida*, April 3, 2020, <https://www.politico.com/states/florida/story/2020/04/03/its-a-sh-sandwich-republicans-rage-as-florida-becomes-a-nightmare-for-trump-1271172>.

32 Wentworth, “Closing Doors,” at 21.

33 NELP, *From Disrepair to Transformation*.

Claimants face many hurdles such as complex and confusing applications with highly technical language, as well as onerous verification requirements to document their identity and ongoing work searches.³⁴ People who lack computers cannot upload required verification documents. People who do not speak English can face language barriers in accessing and completing applications.³⁵ Disabled applicants can struggle to navigate web-based systems whose design fails to accommodate physical or visual impairments.

Further, in the name of fraud prevention and program integrity, “systems have been over-calibrated to prevent overpayments at the expense of paying appropriate benefits.”³⁶ Intentional fraud by unemployed workers is rare; indeed, historically most overpayments have resulted from mistakes on the part of UI agencies due to program complexity. Nevertheless, “an entire cottage industry of vendors has developed to provide tools that identify and prevent fraud.”³⁷ In 2013, Michigan spent \$47 million on an automated fraud detection system called MiDAS, which made roughly 48,000 fraud accusations against unemployment insurance recipients—a five-fold increase from the prior system.³⁸ Without any human review or intervention, the state demanded repayments plus interest and civil penalties of four times the alleged amount owed.³⁹ To collect the repayments—some as high as \$187,000—the state garnished wages, levied bank accounts and

34 Center on Budget and Policy Priorities, “Improving Users’ Experience With Online SNAP and Medicaid Systems,” April 22, 2020, <https://www.cbpp.org/research/health/improving-users-experience-with-online-snap-and-medicaid-systems>.

35 Nicole Dooley and Blair Gilbert, “Language Access During COVID-19 at DOES and DHS,” Legal Aid Society of the District of Columbia, <https://www.makingjusticereal.org/language-access-during-covid-19-at-does-and-dhs>; NELP, *Ain’t No Sunshine*.

36 National Employment Law Project (NELP), “Unemployment Insurance During COVID-19: The CARES Act and Role of UI During the Pandemic,” June 9, 2020, <https://www.nelp.org/publication/unemployment-insurance-covid-19-cares-act-role-ui-pandemic/>.

37 “Centering Workers,” at 20.

38 Robert N. Charette, “Michigan’s MiDAS Unemployment System: Algorithm Alchemy Created Lead, Not Gold,” *IEEE Spectrum*, Jan. 24, 2008, <https://spectrum.ieee.org/riskfactor/computing/software/michigans-midas-unemployment-system-algorithm-alchemy-that-created-lead-not-gold>.

39 Allie Gross, “Update: UIA Lawsuit Shows How the State Criminalizes the Unemployed,” *Detroit Metro Times*, Oct. 5, 2015, <https://www.metrotimes.com/news-hits/archives/2015/10/05/uia-lawsuit-shows-how-the-state-criminalizes-the-unemployed>.

intercepted tax refunds. The financial stress on the accused resulted in evictions, divorces, credit score destruction, homelessness, and bankruptcies.⁴⁰ As it turns out, a state review later determined that 93% of the fraud determinations were wrong.⁴¹

How could a computer system fail so badly? The computer was programmed to detect fraud when claimants' information conflicted with other federal, state and employer records. However, it did not distinguish between fraud and innocent mistakes, it was fed incomplete data, and the computer-generated notices were designed to make people inadvertently admit to fraud. Further, the state dramatically cut its staff, reducing the ability to conduct individualized fraud reviews. Meanwhile, fraud detection software is failing to catch large-scale criminal enterprises that are taking advantage of the pandemic-related chaos to wrongfully claim benefits.

To combat fraud, at least 21 states have purchased facial recognition technology from a private vendor as a way of verifying UI applicants and preventing fraud.⁴² Yet numerous eligible people have been wrongfully denied UI on the basis of an alleged facial mismatch and then spent hours struggling to reach frontline UI staff to get their identifies verified. This is happening against a background of research demonstrating that facial recognition technology is as much as 10 to 100 times less accurate for people of color. “[T]he company is relying on a tool that has been proven to be flawed in the past and must collect sensitive face data that others have shown can be misused.”⁴³ Nevertheless, the maker of the tool, called ID.me, has refused to explain how its algorithm works or to provide statistics regarding its accuracy.

The turn toward privatization has weakened the accountability of digital UI systems. Many states rely on private contractors to build their UI systems, but in numerous

40 Ryan Felton, “Criminalizing the Unemployed,” *Detroit Metro Times*, July 1, 2015, <https://www.metrotimes.com/detroit/criminalizing-the-unemployed/Content?oid=2353533&storyPage=2>.

41 Stephanie Wykstra, “Government’s Use of Algorithm Serves Up False Fraud Charges,” *Undark*, Sept. 6, 2020, <https://undark.org/2020/06/01/michigan-unemployment-fraud-algorithm/>.

42 Dave Gershgorn, “21 States Are Now Vetting Unemployment Claims With a ‘Risky’ Facial Recognition System,” *OneZero*, Feb. 4, <https://onezero.medium.com/21-states-are-now-vetting-unemployment-claims-with-a-risky-facial-recognition-system-85c9ad882b60>.

43 *Ibid.*

states, contractors such as IBM and Deloitte have been accused of massive cost overruns and building faulty systems.⁴⁴ For instance, California awarded Deloitte \$161 million in contracts over the past decade, despite “repeated delays, rising costs and admonishments from auditors and legislators.”⁴⁵ Indiana gave IBM a \$1.3 billion contract to modernize its welfare system, but the state ended up cancelling the contract and suing IBM “following complaints about long wait times, lost documents and improper rejections.”⁴⁶ In Pennsylvania, IBM secured a \$110 million contract to modernize the UI system, but never completed the job, which ran millions of dollars over budget.⁴⁷ In Massachusetts, a system built by Deloitte ran \$6 million over budget and was delivered two years late. Further, “[c]all center wait times doubled, and there were 100–300 claimant complaints per week, owing in large part to a major increase in system-generated questionnaires to claimants, which delayed claims processing.”⁴⁸ The profit motive of private consultants appears fundamentally inconsistent with quality service delivery. Contractors blame the state for failing to maintain adequate staffing; the states blame the contractors for failing to deliver the promised technology. In the midst of the finger pointing and lawsuits, citizens lose.⁴⁹

In the end, the most recent UI system collapse was the result of a national crisis colliding with underinvestment in technological systems, staff retrenchment policies, bureaucratic disentanglement, privatization and outsourcing, and neoliberal assumptions about poor people that are masked behind the supposed objectivity of technology. Yet, despite this bleak picture, we can learn from states that

44 Lecher, “How Unemployment Systems are Failing.”

45 Wes Venteicher and David Lightman, “California Unemployment Agency Keeps Turning to Same IT Firm Despite Delays, Cost Overruns,” *Sacramento Bee*, June 25, 2020, <https://www.sacbee.com/news/politics-government/the-state-worker/article243611952.html>.

46 Rick Callahan, “Appeals Court Affirms Ruling that IBM Owes Indiana \$78M,” *Associated Press*, Sept. 28, 2018, <https://apnews.com/article/36ba0562a02142e5adfe39518e2e0f85>.

47 Paul Mushnik, “Pennsylvania Knew its Unemployment System was Weak. It Didn’t Fix It, and the Coronavirus Crushed It,” *The Morning Call*, Apr. 30, 2020, <https://www.mcall.com/opinion/mc-opi-pennsylvania-unemployment-claims-muschick-20200430-uoboxdlvbfopo3taxog3jhzuu-story.html>.

48 “Centering Workers,” at 11.

49 Ben Tarnoff, “How Privatization Could Spell the End of Democracy,” *The Guardian*, June 21, 2017, <https://www.theguardian.com/technology/2017/jun/21/privatizing-public-services-trump-democracy>.

have adapted to better serve their unemployed citizens.⁵⁰ What do these states have in common? Researchers at the National Employment Law Project find that these states “engaged in robust community engagement and listened to complaints to work to address them.” In addition, they “expressed a wariness about automated decision-making and have maintained a high degree of human involvement in the adjudication process.”⁵¹ Public participation in technology adoption along with a rich understanding of the benefits and risks of automation are essential to address this persistent barrier to economic justice during and after the pandemic.⁵²

50 Simon-Mishel et al., “Centering Workers.”

51 Ibid, 15.

52 For additional recommendations, see Families USA, *Modernizing Public Benefit Eligibility During the Coronavirus Pandemic: Long-Term Lessons and Short-Term Recommendations* (Oct. 2020), <https://familiesusa.org/wp-content/uploads/2020/10/COV-149-COVID-19-and-Public-Benefit-Eligibility-for-the-21st-Century-Recommendations.pdf>.

PART TWO: Superspreading Surveillance Infrastructure

While the collapse of benefits automation exemplifies the widespread failure of technology systems, the pandemic has ushered in a golden age of digital surveillance and renewed techno-optimism. In the name of public health, many commercial and government institutions have increased the scope and scale of surveillance practices that are extractive and exploitative in nature.⁵³ Some of this data-driven infrastructure was already in place before the pandemic, but the “emergency authorization” mindset of a global health crisis created a new rationale for expanded surveillance practices that have the potential to amplify disparities caused by a long history of privacy intrusion and related harm.⁵⁴ Privacy advocates caution that the tools we create today in response to the pandemic will create a “path dependency” and a surveillance “inertia” that will shape future data collection practices for many years to come.⁵⁵

The data collection and digital assessment that occurs as a byproduct of living and working during the COVID-19 era is an increasingly non-negotiable activity, with little to no legal protections in place to account for the expanded digital footprints of millions of Americans. The asymmetrical nature of this surveillance and associated data ownership contributes to the accrual and concentration of institutional power. Notably, Michel Foucault’s writing about “Panopticism” in *Discipline and Punish* also points to measures that were taken during a pandemic (the plague of the 17th century), and echoes the “penetration of regulation into

53 Aziz Z. Huq and Mariano-Florentino Cuéllar, “Economies of Surveillance,” *Harvard Law Review* 133, no. 4 (February 2020): 1280–1336.

54 Mary Madden, et al., “Privacy, Poverty and Big Data”; United Nations, “COVID-19 and Human Rights: We are All in This Together,” April 2020, <https://unsdg.un.org/resources/covid-19-and-human-rights-we-are-all-together>.

55 Woodrow Harzog, “Opinion: Risks With Coronavirus Tracing Apps Go Beyond Privacy,” *Los Angeles Times*, May 12, 2020, <https://www.latimes.com/opinion/story/2020-05-12/coronavirus-tracing-app-apple-google>.

even the smallest details of everyday life” in the COVID-19 era.⁵⁶ As Jeffrey Vagle and other legal scholars have argued, it is often these seemingly benign forms of everyday surveillance that “have a power dynamic that too often shifts from generally beneficial to abusive.”⁵⁷

During the current pandemic, various forms of health-related tracking and testing have become a prerequisite for in-person learning. As schools hastily implemented these systems, this placed a greater experimental burden and outsized impact on low-income families, with parents who were more likely to be essential workers and with less flexibility to support at-home learning for their children. In dozens of districts across the country, students have encountered experimental and unproven health-related surveillance practices, such as the use of thermal cameras to monitor body temperature that were also touted for their facial recognition capabilities and associated disciplinary uses.⁵⁸ In many cases, new tracking tools were being layered on top of pre-existing tracking systems being used for school safety and other forms of student data collection by private educational vendors.⁵⁹ For instance, existing security camera systems were adapted to identify students not wearing masks and to assist with social distancing and contact tracing requirements.⁶⁰

The consequences for COVID-19 era infractions follow a long history of disproportionately heavy disciplinary action towards students of color and those with disabilities. And the severity of punishment has added insult to injury for families who were already experiencing higher rates of illness, job loss and housing

56 Michel Foucault, “Panopticism,” In *Discipline & Punish: The Birth of the Prison*, translated by A. Sheridan (Vintage Books 1995): 195-228. <https://foucault.info/documents/foucault.disciplineAndPunish.panOpticism/>.

57 Jeffrey Vagle, “Surveillance is Still About Power,” *Just Security*, Feb. 9, 2016, <https://www.justsecurity.org/29240/surveillance-power/>.

58 Gregory Barber, “Schools Adopt Face Recognition in the Name of Fighting Covid,” *WIRED Magazine*, November 3, 2020, <https://www.wired.com/story/schools-adopt-face-recognition-name-fighting-covid/>.

59 Charlie Warzel, “Welcome to the K-12 Surveillance State,” *New York Times*, July 2, 2019, <https://www.nytimes.com/2019/07/02/opinion/surveillance-state-schools.tml>.

60 Julie Jargon, “Back to School? Look Out for Covid-Tracking Surveillance Tech,” *Wall Street Journal*, Aug. 11, 2020, <https://www.wsj.com/articles/back-to-school-look-out-for-covid-tracking-surveillance-tech-11597150800?mod=flipboard>.

insecurity. For instance, in Jacksonville, Florida, students who did not consistently wear a mask could be removed from school and forced to return to online learning. In some Texas districts, intentionally coughing on someone could result in criminal charges and classified as assault.⁶¹

In university settings, surveillance of students extended well beyond the confines of school buildings. In State College, Pennsylvania, the police invoked a local COVID-19 mitigation ordinance when issuing an online press release asking the community to help identify photos of college students—presumably posted to social media—who were attending large gatherings.⁶² This form of community reporting adds to a larger trend of increased “citizen surveillance” that has been encouraged through the sharing of images from home security cameras and cellphones on systems and platforms like Ring and Nextdoor.⁶³ In each of these cases, digital records of these disciplinary infractions are likely to follow students well after the pandemic ends. And, as Professor Joy Radice has explained, “juvenile records can follow youth into adulthood and have long-lasting effects,” including a “web of collateral consequences” that can “make it harder, if not impossible, for a person to get a job, secure housing, serve in the military, receive college financial aid, or be granted a state occupational license,” among other harms.⁶⁴

Students who attended school at home often faced a labyrinth of new digital tools and expectations of fluency in navigating online environments built around remote surveillance infrastructure. Further complicating matters, most schools were unprepared for the challenge of securing student communications and data collection against external threats; many educational institutions lacked sufficient

61 Kalya Belsha, “Virtual Suspensions. Mask Rules. More Trauma. Why Some Worry a Student Discipline Crisis is on the Horizon,” *Chalkbeat*, Aug. 21, 2020, <https://www.chalkbeat.org/2020/8/21/21396481/virtual-suspensions-masks-school-discipline-crisis-coronavirus>.

62 State College Police Dept., Media Release, “PSU vs. Indiana Persons of Interest,” Oct. 29, 2020, <http://www.statecollegepa.us/DocumentCenter/View/22677/PSU-vs-Indiana-Persons-of-Interest>.

63 Lauren Smiley, “The Porch Pirate of Potrero Hill Can’t Believe It Came to This,” *The Atlantic*, November 1, 2019, <https://www.theatlantic.com/technology/archive/2019/11/stealing-amazon-packages-age-nextdoor/598156/>.

64 Joy Radice, “The Juvenile Record Myth,” *Georgetown Law Journal* 106 (2018): 368, <https://www.law.georgetown.edu/georgetown-law-journal/wp-content/uploads/sites/26/2018/02/z100218000365.pdf>.

protections against cybersecurity breaches and ransomware attacks—which crippled some of the most well-resourced school systems in the U.S.⁶⁵

Distance learning also introduced new forms of digital management, including automated measures of productivity, focus, and data capture through online assessments, all of which raised significant concerns about perpetuating inequalities and violating student privacy. For instance, an investigation by *The New York Times* revealed a resurgence of automated proctoring software, widely used despite known inaccuracies and concerns about differential impact on students who are already marginalized by the educational system:

“An unusual school year has started in earnest, and with it has come the return of digital proctoring programs. This is software that can lock down students’ computers, record their faces and scan their rooms, all with the intention to thwart cheating.(...) Now many students are finding that the programs they’re required to use may not have been well-designed to consider race, class or disability—and in some cases, simply don’t work.”⁶⁶

Monitoring participation and attendance in remote learning also became fraught, as lower income students were more likely to deal with tech connectivity issues on top of a range of other stresses such as food insecurity, lack of childcare support, and crowded home environments. Many of these students were being marked as absent by automated tools when they didn’t show up to class on time. For instance, in Boston, when students did not log on to online classes, dozens of parents in school districts that predominantly serve Black and Latinx students from low-income families were referred to social workers for possible neglect.⁶⁷

65 Hugh Grant-Chapman. “Three Lessons from COVID-19 and the Changing Landscape of Student Privacy,” Center for Democracy and Technology, November 13, 2020, <https://cdt.org/insights/three-lessons-from-covid-19-and-the-changing-landscape-of-student-privacy/>.

66 Anushka Patil, “How It Feels When Software Watches You Take Tests,” *The New York Times*, September 29, 2020, <https://www.nytimes.com/2020/09/29/style/testing-schools-proctorio.html>.

67 Bianca Vasquez Tonnes, “Your child’s a no-show at virtual school? You may get a call from the state’s foster care agency,” *The Boston Globe*, August 15, 2020, <https://www.bostonglobe.com/2020/08/15/metro/your-childs-no-show-virtual-school-you-may-get-call-states-foster-care-agency/>.

Even students who were able to connect successfully to their classes faced a Wild West of added surveillance and scrutiny that extends into their homes and bedrooms. In Baltimore, this resulted in the police being called to the home of an 11-year-old student after a screenshot from his online class that revealed BB and air soft guns hung on his bedroom wall was deemed as suspicious. There were at least five similar toy gun-related cases in Baltimore documented over the course of three months.⁶⁸

The law provides an inadequate restraint on corporate and governmental surveillance of students, whether they are schooling in person or at home. The Fourth Amendment protects public school students against unreasonable searches, but in court, the governmental interest in reducing school crime is generally deemed to outweigh the privacy interests of students.⁶⁹ Federal statutes that protect student educational records and limit data collection from children contain exceptions that open the door to releases of information to commercial vendors and law enforcement.⁷⁰ Given the permeability of federal legal standards, many states are passing their own laws to limit the collection of students' data, such as by limiting student data sharing with commercial entities and imposing heightened data security standards.⁷¹ Of course, this leaves students across the country with a patchwork of variable protections, leaving them all the more vulnerable to emergency uses of surveillance technology.

During the pandemic, expanding surveillance dynamics also played out in the workplace. This adds to a long legacy of workplace surveillance; employers and companies have used a wide range of technologies to increase productivity and

68 Chris Papst, "Student Privacy Concerns Grow in Virtual Classrooms," *Fox5News*, July 6, 2020, <https://foxbaltimore.com/news/project-baltimore/student-privacy-concerns-grow-in-virtual-classrooms>.

69 Jason P. Nance, "Student Surveillance, Racial Inequalities, and Implicit Racial Bias," *Emory Law Journal* 66 (2017): 765, <https://scholarlycommons.law.emory.edu/elj/vol66/iss4/1/>.

70 Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. § 1232g, and Children's Online Privacy Protection Rule (COPPA), [15 U.S.C. 6501–6505](https://www.ftc.gov/enforcement/rules/implementation-guidelines/childrens-online-privacy-protection-rule); Barbara Fedders, "The Constant and Expanding Classroom: Surveillance in K-12 Public Schools," 97 *N.C. L. Rev.* (2019): 1717-21.

71 Student Privacy Compass, "What do State Student Privacy Laws Cover?" <https://studentprivacycompass.org/about/>; Data Quality Campaign, "Education Data Legislation Review 2020," <https://dataqualitycampaign.org/education-data-legislation-review-20/>.

profits and decrease risk.⁷² These tools include video surveillance, GPS tracking, monitoring software, keystroke tracking, wellness apps and wearables, and email monitoring. Worker surveillance has become so extensive that employers can access a “live feed” of granular behavioral information about workers across a range of settings such as factories,⁷³ in homecare,⁷⁴ and offices.⁷⁵

During COVID-19, there has been an explosion of new apps and wearable devices that track highly sensitive data such as employees’ health information and physical location in order to assess compliance with workplace protocols. An August 2020 report from Public Citizen catalogued 50 of these technologies “being used by at least 32 employers to track at least 340,000 workers and ... available to up to 14,000 additional employers.”⁷⁶ However, the accuracy and effectiveness of these technologies in preventing the spread of coronavirus is unproven. Further, the information collected is often combined with third party data sources and remains unregulated. Notably, the employers using these tools are concentrated in low-wage industries such as construction, food service, auto industry, healthcare settings, and prisons. These tools raise concerns about worker privacy and autonomy, unfair profiling and discrimination.⁷⁷

The pre-existing structure of surveillance in gig economy jobs also enabled rapid integration of new surveillance practices. Data-driven algorithms on platforms such as Uber, Lyft, Postmates and other on-demand services are deployed to manage

72 Alex Rosenblat, Tamara Kneese, and danah boyd, “Future of Labor: Workplace Surveillance,” *Data & Society*, October 8, 2014, <https://datasociety.net/library/workplace-surveillance/>.

73 Ceylan Yeginsu, “If Workers Slack Off, the Wristband Will Know (And Amazon Has a Patent for It),” *The New York Times*, February 1, 2018, <https://www.nytimes.com/2018/02/01/technology/amazon-wristband-tracking-privacy.html>.

74 Jake Metcalf, “When verification is also surveillance,” *Data & Society Points*, February 27, 2018, <https://points.datasociety.net/when-verification-is-also-surveillance-21edb6c12cc9>.

75 Jodi Kantor and David Streitfield, “Inside Amazon: Wrestling Big Ideas in a Bruising Workplace,” *The New York Times*, August 16, 2015, <https://www.nytimes.com/2015/08/16/technology/inside-amazon-wrestling-big-ideas-in-a-bruising-workplace.html>.

76 Public Citizen, Digital Rights Program, “Workplace Privacy After COVID-19,” August 13, 2020, <https://www.citizen.org/article/workplace-privacy-after-covid-19/>.

77 Alexandra Mateescu and Aiha Nguyen, “Workplace Monitoring & Surveillance,” *Data & Society*, February 2019, https://datasociety.net/wp-content/uploads/2019/02/DS_Workplace_Monitoring_Surveillance_Explainer.pdf.

workers remotely and to schedule them for short-term jobs.⁷⁸ These platforms use worker monitoring technologies to collect data on worker behavior, from their availability and location to customer reviews of worker performance.⁷⁹ These features enable companies to remotely manage compliance with new pandemic-related protocols and enlist customers to report infractions.

In these increasingly granular labor contracts, companies can shift many risks, such as the possibility of a worker becoming sick or underperforming due to illness away from the employer to the employee.⁸⁰ The margin of error for these workers is extremely thin to nonexistent, as gig platforms have a history of removing workers from their platforms, with little to no notice or ability to challenge complaints.⁸¹ Adding to this hypercompetitive environment, the COVID-19 crush of newly unemployed Americans looking for gig work has spawned a submarket for “grabber bots” that automatically scoop up batches of jobs for those with the money and know-how to use them.

Employees working from home have also faced added scrutiny. A growing number of firms have begun using facial recognition software to analyze employees’ concentration and mood, while others have turned to applications that aim to assess productivity by measuring keystrokes, time spent using certain applications, and whether certain documents and messages have been read.⁸² Other tools can track employees’ physical locations, record video of employees’ screens while working, and randomly capture photos with a computer’s camera to ensure the employee is physically present.

78 Alex Rosenblat, “The Truth About How Uber’s App Manages Drivers,” *Harvard Business Review*, April 6, 2016, <https://hbr.org/2016/04/the-truth-about-how-ubers-app-manages-drivers>.

79 Alex Rosenblat and Luke Stark, “Algorithmic Labor and Information Asymmetries: A Case Study of Uber’s Drivers,” *International Journal of Communication*, 10 (2016): 27, <http://ijoc.org/index.php/ijoc/article/view/4892>.

80 Friedemann Bieber and Jakob Moggia, “Risk Shifts in the Gig Economy: The Normative Case for an Insurance Scheme Against the Effects of Precarious Work,” *Journal of Political Philosophy*, Aug. 19, 2020, <https://onlinelibrary.wiley.com/doi/full/10.1111/jopp.12233>.

81 Katie Sipp, “Ratings in the Gig Economy Are a Mess. Here’s How to Fix Them,” *Wired*, December 27, 2017, <https://www.wired.com/story/how-to-fix-ratings-in-the-gig-economy/>.

82 Drew Harwell, “Managers turn to surveillance software, always-on webcams to ensure employees are (really) working from home,” *The Washington Post*, April 30, 2020, <https://www.washingtonpost.com/technology/2020/04/30/work-from-home-surveillance/>.

These practices pose a number of threats to employee privacy and autonomy during the pandemic, but are especially likely to misrepresent and undervalue the work of women, parents, and caregivers who may need flexibility to step away from the computer to assist children and other loved ones with school or other needs.⁸³ In some cases, employees have reportedly become so demoralized with the invasiveness of these “tattleware” technologies that they have chosen “privacy over a paycheck” and left their jobs in an act of refusal.⁸⁴ However, the need for financial stability and other factors such as the availability of comparable work often make refusal an impossible trade-off.

Teachers and other employees of educational institutions have faced especially intense pressure to return to work in person under increased COVID-related surveillance regimes. Whether in the classroom or online, teachers have been expected to navigate a labyrinth of new technologies, all while being asked to monitor students and being subjected to new forms of surveillance themselves. For K-12 teachers, the burden of adjusting to these new systems is likely to fall disproportionately on older teachers, teachers of color and those in under-resourced school districts.⁸⁵ At the collegiate level, additional monitoring tools have been deployed to students to report complaints about instructors. For instance, administrators at the University of Florida added a “tattle button” to the campus-safety app for students to report professors who were supposed to be teaching in person but may have hosted a class online due to exposure concerns or the need to care for family members at home.⁸⁶

83 Aiha Nguyen, “On the Clock and at Home: Post-COVID-19 Employee Monitoring in the Workplace,” *SHRM People & Strategy Journal* (Summer 2020), <https://www.hrps.org/resources/people-strategy-journal/summer2020/Pages/feature-nguyen.aspx/>.

84 Bobby Allyn, “Your Boss Is Watching You: Work-From-Home Boom Leads To More Surveillance,” *National Public Radio*, May 13, 2020, <https://www.npr.org/2020/05/13/854014403/your-boss-is-watching-you-work-from-home-boom-leads-to-more-surveillance>.

85 Susan Page, “Back to school? 1 in 5 teachers are unlikely to return to reopened classrooms this fall, poll says,” *USA Today*, May 26, 2020, <https://www.usatoday.com/story/news/education/2020/05/26/coronavirus-schools-teachers-poll-ipsos-parents-fall-online/5254729002/>.

86 Jeffrey R. Young, “U. of Florida Alters ‘Tattle Button’ That Let Students Report Profs Who Don’t Teach In Person,” *Ed Surge*, January 21, 2021, <https://www.edsurge.com/news/2021-01-20-u-of-florida-alters-tattle-button-that-let-students-report-profs-who-don-t-teach-in-person>.

Despite the expansion of surveillance tools and settings, the law provides few boundaries on employer surveillance. To be sure, states generally prohibit cameras in highly intimate settings such as bathrooms, and some states have enacted scattered workplace privacy laws, such as prohibiting employers from demanding access to employee's social media accounts or from requiring employees to having a tracking microchip planted in their bodies. In addition, federal law bars employers from using video to monitor union activities, and unionized employees can collectively bargain about employer monitoring. However, beyond these narrow limitations, the reality is that most employees in America are hired on an at-will basis, and employers can thus condition employment on their consent to a variety of monitoring practices.⁸⁷

Ultimately, both students and employees have had little to no legal standing to object to the expanded forms of surveillance and monitoring imposed under cover of the pandemic. And without added transparency and accountability mechanisms in place, the burden of today's expanded tracking and automated assessments are poised to fall most heavily on those with the fewest resources to challenge their outcomes.

⁸⁷ Ifeoma Ajunwa, Kate Crawford and Jason Schultz, "Limitless Worker Surveillance," *California Law Review* 105, no. 735 (March 2016): 101-142.

PART THREE: Digital Profiling of Economic Distress

Long after the COVID-19 health emergency ends, many Americans will continue to suffer from the long tail of the pandemic's economic devastation as the digital records associated with their struggles become embedded in a range of data analytics tools developed by companies that profit from collecting personal data. The pandemic-related economic hardship will be permanently encoded into people's digital profiles, marking them wrongly as unreliable and undesirable, and limiting their access to future housing, jobs, education, and other needs.

At all hours of the day and night, our data is being gathered, aggregated, and sold.⁸⁸ Data brokers have built an industry mining the digital exhaust that people emit as they go about their daily lives.⁸⁹ These brokers obtain people's data from a wide range of sources, such as public records, web browsing activity, emails, banking activity, social media, license plate readers, app usage, smart devices (such as fitness watches and internet-connected thermostats), and geo-location tracking on our smartphones. Data brokers use algorithms (or computer models) to turn millions of data points into individualized profiles in order to make inferences about our social relationships, political preferences, lifestyle, hobbies, health, and personality.⁹⁰

88 Geoffrey A. Fowler, "It's the Middle of the Night. Do You Know Who Your iPhone is Talking To?" *Washington Post*, May 28, 2019, <https://www.washingtonpost.com/technology/2019/05/28/its-middle-night-do-you-know-who-your-iphone-is-talking/>.

89 Aaron Rieke, Harlan Yu, David Robinson and Joris von Hoboken, "Data Brokers in an Open Society," *Upturn* (November 2016): 5-12, <https://www.opensocietyfoundations.org/uploads/42d529c7-a351-412e-a065-53770cf1d35e/data-brokers-in-an-open-society-20161121.pdf>.

90 Wolfie Christl, "Corporate Surveillance in Everyday Life: How Companies Collect, Combine, Analyze, Trade, and Use Personal Data on Billions," *Cracked Labs*, June 2017, <https://crackedlabs.org/en/corporate-surveillance/>.

They sell these profiles to multiple purchasers, including marketers, law enforcement, financial companies, educational institutions, employers, and government agencies, who then use the data for their own purposes. At the same time, these industries are analyzing their customer and citizen data troves, and then sharing and trading that information within the surveillance economy, thereby creating interconnected networks of data flows. All of this happens without the informed consent or knowledge of the people whose data is gathered.⁹¹ While companies treasure this data in order to predict, and even shape, consumer behavior, marketing is the merely tip of the data iceberg. Digital profiles increasingly serve as gatekeepers to life's necessities, such as housing, employment, health care, financial services, and education, and thus can create and reinforce poverty.

For instance, employers are using applicant tracking systems to identify potential employees who will perform on the job, as well as automated background checks to screen applicants. Colleges are turning to algorithmic assessments to determine which prospective students are likely to stick around for graduation and to pursue those who can pay the full costs of tuition. Landlords are scouring online court dockets and buying tenant screening reports to predict whether prospective tenants will pay the rent. Health insurers are analyzing patient data to predict health risks.

These can be legitimate purposes, but the algorithmic systems that generate digital profiles lack transparency and accountability and have been shown to be infected with biases against minority groups. Digital profiles sort people into categories of worthiness, at micro levels of detail. In its investigation of the data broker industry, the Federal Trade Commission found that data brokers were segmenting consumers into thousands of categories, including those focused on race, ethnicity, and income. These segments included low-income people of color (e.g., "Urban Scramble" and "Mobile Mixers"); low-income seniors ("Rural Everlasting" and "Thrifty Elders"), and low-income consumers ("Underbanked Indicator," and

91 Uri Gal, "Data Surveillance is All Around Us, and It's Going to Change our Behavior," *The Conversation*, October 10, 2016, <https://theconversation.com/data-surveillance-is-all-around-us-and-its-going-to-change-our-behaviour-65323>.

“Financially Challenged”).⁹² The shifting of financial risk onto consumers victimized by exclusionary institutions and practices is one of many contexts in which machine learning tools “rely on, recreate, and often amplify already-existing patterns of how risk is distributed across society, irrespective of whether that risk is fairly or justly distributed.”⁹³

Deploying these fine-tuned inferences, digital profiling further entrenches segregation and subordination of low-income people and people of color, and the pandemic is magnifying these patterns. Not only are more people enduring economic hardship as a result of the pandemic, but also the distress is deeper for many.⁹⁴ People of color and the poor are suffering the harshest economic and health effects of the pandemic. These effects will in turn be baked into their digital profiles, making it harder for them to gain their financial footing even as the public health crisis ebbs.

The pandemic’s impact on housing is a particular concern. Even before the pandemic, one in four of America’s 43 million rental households were spending more than half of their income on rent. Now, there are over 20 million renters who have experienced pandemic-related job losses.⁹⁵ In addition, due to the pandemic, “nearly 18 million households have little or no confidence in their ability to pay the rent [and] over 20% of renter households are behind on rent,

92 Federal Trade Commission, *Data Brokers: A Call for Transparency and Accountability* 20 (2014), <https://www.ftc.gov/system/files/documents/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014/140527databrokerreport.pdf>.

93 Emanuel Moss and Jacob Metcalf, “High Tech, High Risk: Tech Ethics Lessons for the COVID-19 Pandemic Response,” *Patterns* 1,3, October 9, 2020, [https://www.cell.com/patterns/fulltext/S2666-3899\(20\)30136-7?returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS2666389920301367%3Fshowall%3Dtrue](https://www.cell.com/patterns/fulltext/S2666-3899(20)30136-7?returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS2666389920301367%3Fshowall%3Dtrue).

94 Robert Wood Johnson Foundation, “Poll: Half of Households in the Four Largest U.S. Cities Report Serious Financial Problems Including Depleted Savings, and Trouble Paying Bills or Medical Care,” Sept. 9, 2020, <https://www.rwjf.org/en/library/articles-and-news/2020/09/poll-half-of-households-in-the-four-largest-us-cities-report-serious-financial-problems.html>.

95 National Consumer Law Center, “Salt in the Wound: How Eviction Records and Back Rent Haunt Tenant Screening Reports and Credit Scores,” (August 2020), https://www.nclc.org/images/pdf/special_projects/covid-19/IB_Salt_in_the_Wound.pdf.

amounting to over \$50 billion...”⁹⁶; In September 2020, the federal government issued a moratorium on evictions for tenants facing COVID-related financial hardship, and many states have similarly put the brakes on evictions. However, these measures do not cancel rent; rather, they push the accumulating bills farther into the future. Moreover, many landlords are evading the moratorium, and courts are still granting orders of eviction.

As a result of mounting bills, high rates of joblessness, and reduced unemployment insurance, experts predict that 40 million people—disproportionately Black and Latinx⁹⁷—will face eviction when the federal moratorium expires (currently set for the end of March 2021). This harm is also gendered, as Black and Hispanic women are evicted at higher rates than men.⁹⁸ An eviction filing can be a barrier to renting future housing, regardless of the outcome of the case or the reason for the tenant’s failure to pay rent. To select tenants, many landlords purchase tenant screening reports, sold by over 650 specialized data brokers that combine information about an individual’s past eviction history, creditworthiness, and civil and criminal court records in order to score tenants.

Yet these tenant screening reports fold in incomplete data, inaccuracies,⁹⁹ and misleading information that plague the underlying court records.¹⁰⁰ At the same time, these companies obscure the sources of their data and the methods of their

96 Emily Benfer, “The American Eviction Crisis, Explained,” *The Appeal*, March 3, 2021, <https://theappeal.org/the-lab/explainers/the-american-eviction-crisis-explained/>.

97 Relatedly, the Black unemployment rate is consistently double that of whites, a rate that remained steady during the bulk of the pandemic. Oluwbenga Ajilore, “The Persistent Black-White Unemployment Gap is Built into the Labor Market,” *Center for American Progress*, September 28, 2020, <https://www.americanprogress.org/issues/economy/news/2020/09/28/490702/persistent-black-white-unemployment-gap-built-labor-market/>; Jhacova Williams, “Laid Off More, Hired Less: Black Workers in the COVID-19 Recession,” *The Rand Blog*, September 29, 2020, <https://www.rand.org/blog/2020/09/laid-off-more-hired-less-black-workers-in-the-covid.html>.

98 Benfer, “The American Eviction Crisis, Explained.”

99 Adam Porton, Ashley Gromis, and Matthew Desmond, “Inaccuracies in Eviction Records: Implications for Renters and Researchers,” *Housing Policy Debate*, July 28, 2020, 1-18. <https://doi.org/10.1080/10511482.2020.1748084>.

100 Lauren Kirchner and Matthew Goldstein, “Access Denied: Faulty Automated Background Checks Freeze Out Renters,” *The Markup*, May 28, 2020, <https://themarkup.org/locked-out/2020/05/28/access-denied-faulty-automated-background-checks-freeze-out-renters>.

scoring systems. Further, most applicants for housing never learn the reason why the landlord rejected them, and thus have no opportunity to clarify or correct information within a tenant screening report or to challenge its assumptions.

Due to the pandemic's economic impact, low-income homeowners are also facing sinking credit and housing instability. Delinquent mortgages have doubled,¹⁰¹ and due to disparate patterns of job loss and a longstanding racial wealth gap, Black and Latinx homeowners are falling behind on their mortgages at two times the rate of other Americans.¹⁰² Yet they are less likely to obtain available mortgage forbearances or other modifications to their loans.¹⁰³ Further, pandemic-related foreclosure moratoriums will end, resulting in millions of homeowners losing their most valuable asset—and gaining a digital negative mark that will persist far into the future.

Credit scores are expected to take a beating as people struggle to pay utility and internet bills, as well as educational, auto, and other loans. A low credit score in turn reduces a person's ability to obtain affordable loans as well as insurance, housing, and employment.¹⁰⁴ Moreover, in the midst of massive job losses, at least 5.4 million people have lost their health insurance,¹⁰⁵ on top of 25 million who were already uninsured. For an uninsured person hospitalized with COVID-19, the estimated cost of medical care ranges over \$70,000. 99% of unpaid medical bills end up in

101 Diana Olick, "COVID-19 Mortgage Bailouts Decline Slightly, But a New Foreclosure Crisis Could be Brewing," *CNBC*, September 11, 2020, <https://www.cnbc.com/2020/09/11/coronavirus-mortgage-bailouts-decline-but-new-foreclosure-crisis-could-be-coming.html>. Further, even under algorithmic lending, minorities pay more for loans. Robert Bartlett et al., "Consumer-Lending Discrimination in the FinTech Era," *NBER Working Paper 25943*, June 2019, <https://www.nber.org/papers/w25943>.

102 Michal Grinstein-Weiss, Brinda Gupta, Yung Chun, Hedwig Lee, Mathieu Despard, "Housing Hardships Reach Unprecedented Heights During the COVID-19 Pandemic," *Brookings*, June 1, 2020, <https://www.brookings.edu/blog/up-front/2020/06/01/housing-hardships-reach-unprecedented-heights-during-the-covid-19-pandemic/>.

103 National Consumer Law Center, "A Looming Crisis: Black Communities at Greatest Risk of COVID-19 Foreclosure," July 2020, https://www.nclc.org/images/pdf/special_projects/covid-19/IB_Covid_Black_Forbearance_Foreclosure.pdf.

104 Lea Shepard, "Toward a Stronger Financial History Antidiscrimination Norm," *Boston College Law Review* 53, no. 5 (2012): 1695–1766. <https://lawdigitalcommons.bc.edu/cgi/viewcontent.cgi?article=3262&context=bclr>.

105 Jessica Wapner, "Covid-19: Medical Expenses Leave Many Americans Deep in Debt," *The BMJ*, Aug. 14, 2020, <https://www.bmj.com/content/370/bmj.m3097>.

collections and appear on credit reports.¹⁰⁶ All of these trends are rushing the United States toward a “debt collection pandemic.”¹⁰⁷

For people with outstanding debt, the CARES Act (the pandemic relief legislation passed in March 2020), provided some relief for consumers able to obtain and afford accommodations with their creditors.¹⁰⁸ If consumers can keep up with such an agreement, their credit reports must list their accounts as current—for at least until 120 days after the emergency ends. However, creditors are not required to negotiate with consumers, and many consumers do not have the money available to make such arrangements. Other consumers are unable to even get their creditors on the phone, or lack the time, language skills, or knowledge to negotiate.¹⁰⁹ And regardless, eviction records and debt collection accounts¹¹⁰ fall outside this relief bill.¹¹¹

Further, some creditors are not complying with the Act. For instance, reports emerged that one company was lowering credit scores for consumers who merely inquired about the possibility of COVID-19 related mortgage forbearance.¹¹² In addition, early indicators suggest that credit is expected to tighten and that forbearance

106 National Consumer Law Center, “Protecting Credit Reports During the COVID-19 Crisis,” April 2020, https://www.nclc.org/images/pdf/special_projects/covid-19/IB_Protecting_Credit_Reports_Covid.pdf.

107 Pamela Foohey, Dalié Jiménez, and Christopher K. Odiwet, “The Debt Collection Pandemic,” *California Law Review Online* 11 (May 2020), <http://www.californialawreview.org/debt-collection-pandemic/>.

108 An accommodation is an agreement for a forbearance, a payment deferral, a partial payment agreement, a loan modification, or “any other assistance or relief granted to a consumer who is affected by the coronavirus disease 2019 (COVID-19) pandemic during the covered period.” 15 U.S.C. § 1681s-2(a)(1)(F)(i)(I).

109 NCLC, “Protecting Credit Reports.”

110 Aggressive medical debt collection has persisted throughout the pandemic, particularly targeted at African-Americans, see Alec MacGillis, “One Thing the Pandemic Hasn’t Stopped: Aggressive Medical Debt Collection,” *ProPublica*, April 28, 2020, <https://www.propublica.org/article/one-thing-the-pandemic-hasnt-stopped-aggressive-medical-debt-collection>.

111 NCLC, “Protecting Credit Reports.” People are even facing surprise medical bills for COVID testing. Donna Rosato, “How ‘Free’ Coronavirus Testing Has Become the New Surprise Medical Bill,” *Consumer Reports*, July 27, 2020, <https://www.consumerreports.org/coronavirus/how-free-coronavirus-testing-has-become-new-surprise-medical-bill/>.

112 Scott Medintz, “How to Protect Your Credit Score During the Coronavirus Pandemic,” *Consumer Reports*, June 2, 2020, <https://www.consumerreports.org/credit-scores-reports/how-to-protect-your-credit-score-during-the-coronavirus-pandemic/>.

opportunities will be restricted, as financial institutions confront their own economic pressures.¹¹³ Thus, low- and moderate-income consumers may be shut out of access to credit even when the health crisis passes.

Meanwhile, consumer complaints to the Consumer Financial Protection Bureau (CFPB) about credit reporting have surged 86%.¹¹⁴ Complaints have doubled regarding incorrect information in consumer reports, particularly allegations that the reported information involves another person. This issue of mixed files is a long-standing and well-known problem in credit reporting.¹¹⁵ Still, legal processes to correct credit reporting errors are cumbersome, time-consuming, and tilted against consumers—indeed, during the pandemic, consumer complaints about unsatisfactory investigations have also spiked.

Some consumers remain outside mainstream credit markets, but this is no advantage in the “datafied” society. One in 10 Americans are credit invisible, meaning they have no credit history whatsoever, and they are disproportionately Black, Latinx, and poor. Falling into this “surveillance gap”¹¹⁶ means that they struggle to obtain loans to meet their needs, such as to rent a home or buy a car.¹¹⁷ While they may lack credit scores,¹¹⁸ they are nevertheless profiled based on their interactions with subprime financial markets. Indeed, there are companies who specialize in assembling the digital profiles of people who struggle financially due to a lack of a living wage, inaccessible banking opportunities, and other structural, economic disadvantages that are tolerated in America.¹¹⁹

113 Ibid.

114 U.S. PIRG, “CFPB Complaints Surge During Pandemic, Led by Credit Report Complaints,” August 13, 2020, <https://uspirg.org/reports/usp/analysis-cfpb-complaints-surge-during-pandemic-led-credit-report-complaints>.

115 Vlad A. Hertz, “Fighting Unfair Classifications in Credit Reporting: Should the United States Adopt GDPR-Inspired Rights in Regulating Consumer Credit?,” *NYU Law Review* 93 (2018), <https://www.nyulawreview.org/wp-content/uploads/2018/12/NYULawReview-93-6-Hertz.pdf>.

116 Michele Gilman and Rebecca Green, “The Surveillance Gap: The Harms of Extreme Privacy and Data Marginalization,” *NYU Review of Law & Social Change* 42, no. 2 (2018): 253–307. <https://socialchangenyu.com/wp-content/uploads/2018/04/GilmanGreen.pdf>.

117 Diana Elliott, “What is the Cost of Poor Credit?” *Urban Institute*, September 2018, https://www.urban.org/sites/default/files/publication/99021/what_is_the_cost_of_poor_credit_1.pdf.

118 National Fair Housing Alliance, “Access to Credit,” <https://nationalfairhousing.org/access-to-credit/>.

119 Consumer Financial Protection Bureau, “List of Consumer Reporting Companies,” (2020), https://files.consumerfinance.gov/f/documents/cfpb_consumer-reporting-companies-list.pdf.

Lacking options, many credit invisible and other financially strapped people turn to high-interest loans such as installment loans, car title loans, and payday lending. Online searches for these types of subprime products rose during the pandemic.¹²⁰ A payday loan is a short-term, unsecured, high-interest loan that is repayable with the borrower's next paycheck (thus requiring employment). The average annual percentage rate (APR) for online payday loans is 650%.¹²¹ Due to high interest rates, borrowers struggle to pay back the loans, and 80% of payday loans are taken out to cover prior loans,¹²² resulting in a "debt trap."

Digital profiling allows predatory lenders to target vulnerable consumers, and then to encode their economic misery into a range of other consumer reports.¹²³ Payday lenders are getting around Facebook and Google advertising bans for this industry¹²⁴ and are targeting these groups, just as they did during the Great Recession.¹²⁵ Anyone searching online for available credit can expect to be bombarded with pop-up ads, ads on social media, emails, text messages, and other outreach from web-based lenders that evade state usury restrictions.¹²⁶

120 Emily Stewart, "Americans are Falling Through the Safety Net. The Government is Helping Predatory Lenders Instead," *Vox*, August 26, 2020, <https://www.vox.com/policy-and-politics/2020/8/26/21401493/payday-loans-cfbp-occ-fdic-rent-bank-covid-19>.

121 The Pew Charitable Trusts, "Fraud and Abuse Online: Harmful Practices in Internet Payday Lending," (Oct. 2014), https://www.pewtrusts.org/-/media/assets/2014/10/payday-lending-report/fraud_and_abuse_online_harmful_practices_in_internet_payday_lending.pdf.

122 "Payday Loan Facts and the CFBP's Impact," Pew, January 14, 2016, <https://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2016/01/payday-loan-facts-and-the-cfbps-impact>.

123 Nusaiba Mizan, "Wisconsin Warns Payday Lenders Not to Take Advantage of Unemployed, Underemployed Amid Coronavirus Pandemic," *Green Bay Press-Gazette*, March 20, 2020, <https://www.greenbaypressgazette.com/story/money/2020/03/30/wisconsin-payday-lenders-warned-not-to-take-advantage-of-unemployed/5078352002/>; Megan Leonhardt, "California Passes New Rules that Cap Personal Loan Interest at 36%," *NBC*, September 13, 2019, <https://www.cnbc.com/2019/09/13/california-passes-new-rules-that-cap-payday-loan-interest-at-36percent.html>.

124 Coulter Jones, Jean Eaglesham, and AnnaMaria Andriotis, "How Payday Lenders Target Consumers Hurt by Coronavirus," *Wall Street Journal*, June 3, 2020.

125 "High Interest Payday Loan Lenders Target Vulnerable Communities During COVID-19," *WBUR Here & Now*, June 5, 2020, <https://www.cnbc.com/2019/09/13/california-passes-new-rules-that-cap-payday-loan-interest-at-36percent.html>.

126 Jones et al., "Payday Lenders."

In sum, today's financial hardships driven by the pandemic and its aftereffects will be embedded in tomorrow's digital profile, posing a barrier to economic stability and security for millions of Americans.

Policy Frameworks to Advance Data Justice as a Foundation for Economic Justice

Data justice requires challenging the automated decision-making systems that engender and perpetuate economic and racial inequality. A robust critique of algorithms focuses on how they can undermine three interrelated values, essential to a democratic society: transparency, accountability, and fairness. Algorithmic systems are often opaque due to their complexity as well as their makers' proprietary interests. They can hinder accountability when they displace human judgment or remain unexamined due to their imagined (but impossible) objectivity. And they can be unfair when their outcomes are biased, incorrect, or incomplete. Each of these negative impacts has the potential to act as a barrier to data justice on its own, but all too often these features of algorithmic decision-making work together to further destabilize and disempower those who would seek redress within our current legal system.

A newer round of critical, algorithmic appraisal goes even further—asking us to **consider whether certain** kinds of algorithmic systems should be deployed at all and who gets to decide.¹²⁷ These queries inevitably lead to the issue of refusal: What data-centric practices should be eliminated altogether?¹²⁸ To this question, we offer an answer: If technology is not advancing the racial

127 Frank Pasquale, "The Second Wave of Algorithmic Accountability," *LPE Project*, November 25, 2019. <https://lpeproject.org/blog/the-second-wave-of-algorithmic-accountability/>; Catherine D'Agnazio and Lauren F. Klein, *Data Feminism* (MIT Press 2020), 60—(emphasizing "Concepts that challenge power" such as justice, oppression, equity, co-liberation, reflexivity, and understanding context).

128 Seeta Peña Gangadharan, "Digital exclusion: a politics of refusal," in Hélène Landermore, Rob Reich and Lucy Bernholz (eds.), *Digital Technology and Democratic Theory*, (University of Chicago Press, 2020), <http://eprints.lse.ac.uk/103076/>; Marika Cifor, Patricia Garcia, TL Cowan, Jasmine Rault, Tonia Sutherland, Anita Say Chan, Jennier Rode, Anna Lauren Hoffmann, Niloufar Salehi and Lisa Nakamura, "Feminist Data Manifest-No," 2019, <https://www.manifestno.com/>; Tamkia Lewis, Setta Peña Gangadharan, Mariella Saba and Tawana Petty, *Digital Defense Playbook: Community power tools for reclaiming data*, (Detroit: Our Data Bodies, 2018), https://www.odbproject.org/wp-content/uploads/2019/03/ODB_DDP_HighRes_Spreads.pdf.

and economic justice of all Americans, it requires regulation, retooling, or retirement. With that in mind, we offer five broad-based principles that should inform policymaking going forward:

1. **Institutions, rather than individuals**, should bear greater responsibility to assess and limit the potentially harmful impact of algorithmic decision-making systems on racial and economic inequality *before* they are deployed and throughout their life cycle.
2. **Stakeholder participation** should be encouraged and sustained throughout the technology development, procurement and implementation lifecycle.
3. **Transparency and accountability** should be elevated as essential requirements of any algorithmic system that determines the distribution of public benefits or access to essential life needs, such as employment, housing, health care, or education.
4. **Digital markers of economic hardship** should receive added scrutiny in any algorithmic decision-making system. In particular, pandemic-related debts and evictions, and any penalties associated with unequal surveillance in education and workplace settings should be expunged from digital profiles whenever possible.
5. **Technology design and access** should take into account the diverse interests, needs, and experiences of users, and center their voices in various stages of the design process.

In addition, within each area of concern highlighted in this primer, we recommend the following sector-specific considerations that could be reformed at the federal or state levels and via legislation or regulation, depending on the existing legal frameworks:

Benefits Automation

- Promote accountability by providing human review of automated decisions that deny or reduce benefits; ensure adequate staffing for interactions with the public; and hire staff with technical expertise to provide review and oversight of automated systems purchased from outside vendors.

- Improve accuracy and equity in automated decision-making by preparing algorithmic impact assessments before systems are adopted and conducting regular audits of benefits systems once they are operational.
- Enhance transparency by mandating that algorithmic systems be reviewable and accessible to the public.
- Design systems with users in mind by limiting data collection and retention and adopting interfaces that are accessible, available, and understandable to the general public, with special attention paid to language access, disability access, and the digital divide.
- Improve system design and responsiveness by engaging a broad range of stakeholders, including system beneficiaries, at all phases of adopting, implementing, and monitoring automated systems.
- Protect the privacy of citizens by maintaining rigorous data security protocols and prohibiting the sale or sharing of public benefits data with private entities for commercial purposes.

Surveillance in Education and Employment

- Restrict the sale or sharing of worker data collected through monitoring systems.
- Limit the collection and retention of worker and student data and the scope of its use to the narrow purposes for which it is gathered.
- Provide workers and students with clear and understandable notice describing all data collection, usage, and surveillance practices.
- Engage workers and students' families in a process of review and feedback before new surveillance tools are integrated and after they are implemented.
- Ensure workers and students have a protected process to raise concerns about surveillance practices and the potential for bias and inaccurate information.

- Allow workers and students to access their data records and any information that leads to consequential decision-making and assessment of performance.

Digital Profiling and Economic Justice

- Limit the future impact of evictions by sealing and expunging eviction records generated during the pandemic and prohibiting landlords from reporting evictions or unpaid rent accrued during the pandemic to credit-reporting agencies.
- Protect consumer credit scores by halting reporting of adverse data connected to pandemic hardship.
- Enhance consumer reporting accuracy by improving appeal processes and increasing responsibility on furnishers of data and credit bureaus to ensure accuracy and imposing penalties for failing to do so.
- Expand economic opportunity by banning credit scoring for non-credit purposes such as employment and housing and by eliminating medical debt from credit scoring.
- Enhance accountability for credit scoring by creating a public credit registry.
- Strengthen data privacy by passing comprehensive, federal privacy legislation that provides consumers with rights to control their data and obligates governments and businesses to take affirmative steps to secure personal data, and limit data collection and sharing solely to providing the goods or services requested by the consumer.

Acknowledgments

The authors acknowledge and thank the participants in the Data & Society research seminar for their comments on earlier drafts of this primer. Thanks also to Jasmine McNealy and Trene Hawkins for their feedback. Special thanks to Patrick Davison for editorial guidance and prowess on this project, Yichi Liu for the thoughtful cover design and layout, and to the Communications Team for bringing this seminal work into the world. This report was made possible with the generous support of the John S. and James L. Knight Foundation.

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April 2021