DATA CAPITALISM +
ALGORITHMIC RACISM

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DATA FOR
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Algorithmic Racism

Even before the global pandemic drastically increased reliance on communications technology for working, learning, shopping, and socializing at a distance, Americans from all walks of life reported a growing unease about the impact of technology companies on our country.[1] Whether it is the gig economy company that tinkers with its incentive algorithms—and sends pay plummeting for thousands of "independent contractors,"[2] or the firm peddling facial recognition technology that disproportionately misidentifies people of color as wanted criminals,[3] the video site that promotes inflammatory misinformation guaranteed to generate clicks,[4] or the social media giant that lets advertisers exclude Black homebuyers from seeing real estate ads in particular neighborhoods,[5] communities across the country are struggling with the effects of unaccountable **data*** extraction and algorithmic decision-making. Concerns go far beyond worries about personal privacy to fundamental questions of power and control. This paper makes the case that the underlying driver is **data capitalism**: an economic model built on the extraction and commodification of data and the use of **big data** and **algorithms** as tools to concentrate and consolidate power in ways that dramatically increase inequality along lines of race, class, gender, and disability.

At its core, racial inequality is a feature, not a bug, of data capitalism. Indeed, big data is not as novel or revolutionary as it is commonly understood it to be. Instead, it is part of a long and pervasive historical legacy and technological timeline of scientific oppression, aggressive public policy, and the most influential political and economic system that has shaped and continues to shape this country's economy: chattel slavery. **Algorithmic racism** occurs when contemporary big data practices generate results that reproduce and spread racial disparities, shifting power and control from Black and brown people and communities.

This report aims to help policymakers, movement leaders, and thinkers better understand and address the challenges posed by data capitalism and the ways it is fundamentally intertwined with systemic racism. The report describes the core problem of data capitalism, surveys its roots in history, and briefly examines how it manifests today in the workplace, consumer marketplace, and public sphere. We show that the evolving system of data capitalism is not the inevitable result of technological progress, but rather the result of policy decisions. This brief will highlight key policy shifts needed to ensure that potent technological tools no longer concentrate the might of a white-dominated corporate power structure, but are instead used in ways that will benefit Black lives. We know that when Black lives truly matter, everyone will benefit. Finally, we conclude with a look at groups mobilizing to challenge data capitalism, vividly illustrating that our current path is not inevitable.

Please see the glossary at the end of this report for definitions of tech terminology. Words defined in the glossary are **bold the first time they appear in the text.*

What is Data Capitalism?

This report uses the term "data capitalism" to describe an economic model built on the extraction and commodification of data and the use of big data and algorithms as tools to concentrate and consolidate power in ways that dramatically increase inequality along lines of race, class, gender, and disability. Data capitalism differs from terms such as "surveillance capitalism"[6] in its recognition that the central problem is not surveillance technology itself, but the ways technology is deployed to reinforce pre-existing power disparities. This report particularly focuses on disparities in racial and economic power and on exploring how data capitalism is rooted in slavery and white supremacy, even as we recognize that capitalism and white supremacy intersect with other forms of domination, including (hetero) patriarchy, cis-normativity, settler colonialism, and ableism.[7]

The Problem of
Data Capitalism

The use of data and information systems to subjugate and control has a long history.[8] The new element is how companies are deploying new technological capabilities in ways that intensify and accelerate existing trends. The first component is ubiquitous surveillance. Tech corporations such as Google and Facebook offer ostensibly free online services while exhaustively monitoring the online activity of users: every search, "like," clicked link, and credit card purchase. Real-time location tracking by cell phone and surveillance by smart devices—from speakers to doorbells to thermostats to cars—enable corporate data collection offline as well. Public and private surveillance cameras, and increased employer monitoring of workers' online activity, email, movements, and activity off the job, contribute to pervasive surveillance and unprecedented extraction of personal data, often without people's awareness. Data is monetized when it is sold and resold, and algorithms are used to aggregate data from different sources to build an increasingly detailed picture of personal habits and preferences, which companies feed into predictive tools that model future outcomes and produce categorizations, scores, and rankings. Big data is used not only to sell targeted advertising, but also to make an increasing array of high-stakes **automated decisions** around employment, investment, lending, and pricing in the private sphere and consequential government decisions in areas including criminal justice, education, and access to public benefits.

Technological tools amplify the process of data extraction and the use of algorithmic sorting and ranking to categorize and evaluate people for their "worthiness" to access everything from a new job to a home loan to health care coverage under Medicaid. Algorithms are primarily designed by affluent, white, male programmers based on **training data** that reflects existing societal inequalities. For example, an employer who wanted to retain employees longer found that distance from work was the most significant variable associated with how long workers remained with the employer. However, because of enduring patterns of residential segregation based on a legacy of discrimination and redlining, it was also a factor that strongly correlated with race.[9] Without addressing underlying disparities and injustices, automated decisions based on algorithms evaluate people against a disproportionately white, male, able-bodied, middle-class or wealthy, U.S.-citizen norm that is depicted as universal and unbiased. This is the "coded gaze," a term developed by scholar and artist Joy Buolamwini to describe "algorithmic bias that can lead to social exclusion and discriminatory practices."[10] As activist Hamid Khan observes, it's "racism in-racism out."[11]

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Yet because numerical rankings and categories are produced by computer algorithms drawing on large data sets, they are often presented and perceived as objective and unbiased, offering a veneer of scientific legitimacy to decisions that amplify and perpetuate racism and other forms of injustice. Using the pretense of science to rationalize racism is a timeworn ploy that harkens back to the 19th century, when discredited ideas of phrenology and physiognomy were deployed to claim that "innate" biological differences justified discrimination and the social inequality that resulted.[12] The same dynamic of amplified inequality with a scientific façade shows up today in workplaces, the consumer marketplace, and in the public sphere.

The core problem is not simply one of personal privacy being violated, but of the tremendous power disparities built into the system: While surveillance and data extraction expose every detail of people's lives, the algorithms used to evaluate people and make decisions that profoundly impact life chances are kept secret and are insulated from challenge or question. This extreme informational asymmetry consolidates power in the hands of the corporations that control the data and algorithms—further deepening existing inequality. In this section of the paper, we will trace the roots of data capitalism in chattel slavery and its evolution over time, exploring its pernicious consequences in the workplace, consumer marketplace, and public sphere.

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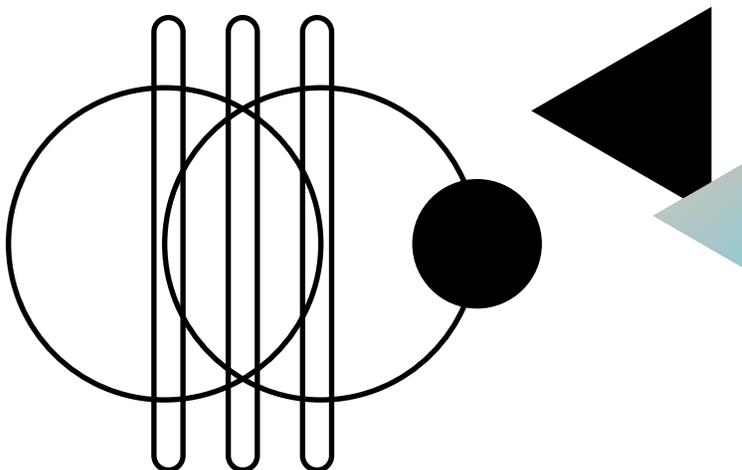
What is an Algorithm?

An algorithm is a set of instructions to solve a problem or perform a task. For example, recipes are algorithms: a list of instructions or a process to prepare the dish, the ingredients that make up the dish, and a result. But within the problem we're trying to solve or the task we're trying to perform are decisions about optimizing for something. With our recipe, do we want to focus on making a healthy meal, or a delicious meal regardless of health benefits? That will inform how we go about looking for the recipe, which recipe we decide to use, and what modifications we might make.

Algorithms can have different levels of sophistication and complexity, and it's not always as simple as raw data being fed into the algorithm and outputs emerging, such as scores, ratios, GPS routes, and Netflix recommendations, for example. History and values ultimately influence inputs and outputs. Baked into the mathematical formulas of the algorithm, represented by lines of code, are legacies of racist public policy and discrimination dating back to the foundation of this country, codified through existing data sets as if they were digital artifacts of the past. Data scientists, activists, and practitioners have posited that no algorithm is neutral, and that algorithms are opinions embedded into code.[13]

A History of Data Capitalism
and Algorithmic Racism

Before we can discuss algorithms, machine learning, and the ways in which racist narratives and bias are being perpetuated through technology in this current moment, we must first discuss the history of big data. What were the economic, imperialistic, and colonial contexts that required the level of record-keeping, accounting, and surveillance that have come to define the big data practices of today?

Big Data is Rooted in Chattel Slavery

It might be comforting to think that the cruelty and immorality of chattel slavery means that it was a poorly functioning system. However, the opposite is true: it was a system that worked well, designed for success in a capitalist society. The system of chattel slavery provided the testing ground to prove the concepts in scientific management, management science, and finance that are foundational to "good business practices" today.

At their strength in the 1600s and 1700s, the Dutch East and West Indian Companies, the leading corporations in the trans-Atlantic slave trade, had more wealth in proportional terms than Apple, Google, and Facebook combined[14] Just like corporations today, these companies developed new data practices and maintained massive, multi-national operations. Their strategies for building a successful business on the backs of human slaves created the template for other colonial powers to use similar strategies to advance colonialism and imperialism.

Chattel slavery was the first-use case for big data systems to control, surveil, and enact violence in order to ensure global power and profit structures. Data on enslaved people and data on the business operations of plantations and slave traders flowed up and down hierarchies of management and ownership. From this flow of data, plantation overseers, slave owners, and slave traders were able to disassociate in the name of optimization and efficiencies. "Planters' control over enslaved people made it easier for them to fit their slaves [enslaved African people] into neat empirical rows and columns," writes Caitlin Rosenthal.[15] For instance, both the "Negro Account" and the "Livestock Account" for the British Guyana plantation Hope & Experiment used the same methods of calculating increase, decrease, purchase, sale, death, appreciation, and depreciation.[16] This data flow and the reduction of human life into mere data points, like today's data flows in corporations and the use of datasets by CEOs and corporate boards, allows for people at the top of the hierarchy to be responsible for the harm they cause but never accountable to the people they have harmed.

In addition to translating human life into numbers in rows and columns, overseers, slave owners, and slave traders collected data in order to track weapons, restrict information, and control connections, a precursor to the surveillance and policing systems of today.[17] The information systems of the 1600s to 1800s were designed to extinguish networks that would have allowed enslaved people to rise up together against their captors and the economic system that entrapped them.

Algorithmic Racism in the 20th Century

From the 1600s to today, there are countless examples of data capitalism and algorithmic racism. But redlining stands out as a more recent snapshot that illustrates the power of ongoing discriminatory trends. In 1933, as part of the New Deal, the Home Owners Loan Corporation developed a grading system that deemed some areas desirable and others hazardous. The creation of security maps that literally outlined Black and other "undesirable" communities in red encouraged the practices of real estate boards, neighborhood associations, and white mob violence that made it impossible for Black people to own homes. Miami, Florida offers a glaring example of how race, place, and data-driven inequality were intertwined: Cubans who lived in or near Liberty City, often poorer and of African descent, occupied "D" neighborhoods, while Cuban immigrants who lived in high-end homes off of Biscayne Bay found themselves in "A" communities. In the state's eyes, they were variously "white" or "Negro" for the sake of bureaucratic simplicity.[18] "Neighborhood grading during the 1930s was hardly a science, but the program's scientific trappings helped turn popular racial knowledge into real-world consequences," writes historian N. D. B. Connolly.[19]

Today, 74 percent of the areas deemed hazardous in 1933 remain low-to-moderate income, under-resourced, and neglected, and this is not by accident, but by design.[20] Created in the early 20th century to organize the country for the postal service, the ZIP code also serves as a digital record keeper and, used within big data systems, extends the shelf-life of the racist public policies of the past. Machine learning models that include ZIP codes have the potential to reinforce the discriminatory impact of these policies exponentially—especially in algorithms that have economic implications in people's lives. Researchers have found that car insurance algorithms—without using race—discriminate by ZIP code, resulting in predatory practices that impact communities of color. According to ProPublica, a resident living in a commercial district with high crime rates in Chicago and driving a sports car pays hundreds of dollars less in car insurance than working-class families living in Chicago's Black and Latinx communities, where car theft and related crimes are less prevalent.[21]

Data Capitalism in the Workplace

The history of data capitalism is the foundation of the present day, as contemporary life continues to be pervaded by deep racial and gender inequalities rooted in past and ongoing discrimination. Inequality in American labor markets was maintained by law for much of U.S. history: When many of the nation's core employment laws, such as minimum wage and overtime protections, were enacted in the 1930s, lawmakers deliberately excluded occupations like farm labor and domestic work that predominantly employed Black and brown people and women.[22] Before the Civil Rights Act of 1964, employers in many states were legally allowed to discriminate on the basis of race, color, religion, sex, and national origin. While these types of employment bias are now illegal, evidence of persistent discrimination remains widespread. Black and brown workers—particularly Black and brown women—are disproportionately employed in lower-paying jobs, and wage inequality persists across levels of education and experience.[23] Most recently, Black and brown women have experienced the greatest job losses as a result of the pandemic recession.[24]

Data capitalism amplifies these inequalities in the workplace, while also magnifying another fundamental inequality: the power of employers over the people who work for them. Under data capitalism, employers deploy data technology to intensify work, disempower workers, and dodge accountability for their workforce, while funneling the benefits of increased efficiency, lower costs, and higher profits to upper management and corporate shareholders, who are disproportionately white.[25] Because Black and brown workers are more likely to be employed in insecure, lower-paying jobs, they are most likely to bear the brunt of intensified work, dehumanization, and the evasion

of legal protection.Employer surveillance is growing dramatically. A survey of 239 large corporations found that between 2015 and 2018, half of companies used some form of worker surveillance.[26] The proportion was expected to rise to 80 percent in 2020. Michelle Miller, co-founder of Coworker.org, describes how surveillance technology is used to implement invasive performance tracking systems that intensify work, reducing workers' pay, autonomy, and downtime, and making it more difficult for workers to hold employers accountable. The entire work experience of people working for digital **platform companies** like Uber, TaskRabbit, and Instacart—from task allocation, to performance ratings, to pay and wage setting—is governed automatically by means of digital surveillance and data extraction.[27] At the same time, workers in more conventional jobs including warehouse workers, home health aides, retail employees, farm workers, and manufacturing workers in global supply chains, are also frequently tracked digitally as they work and are managed and evaluated by algorithm. In white collar workplaces, workers are increasingly tracked on their computers and moving around the office. As more white collar and administrative employees are shifting to remote work during the global pandemic, employers are implementing more intense digital surveillance for workers logging in from home.[28]
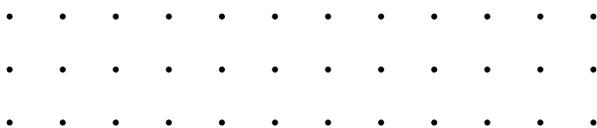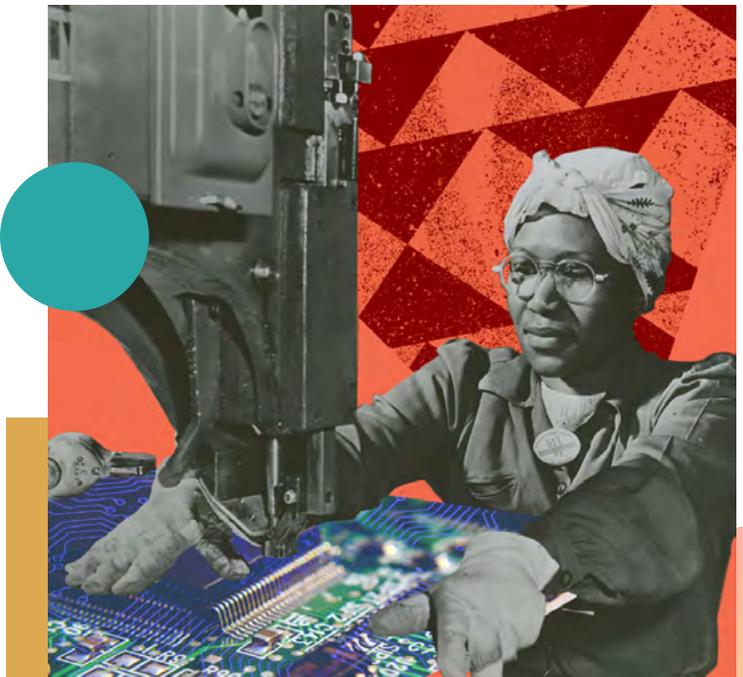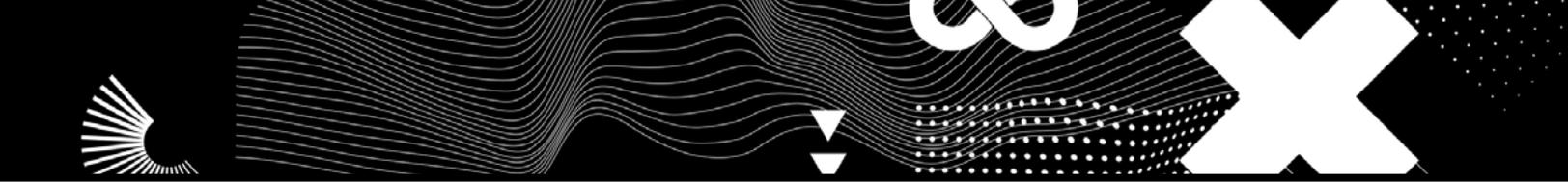
Data Capitalism Intensifies Work and Disempowers Workers

Using data extracted from workers, companies push for relentless optimization and pressure workers to meet algorithmically determined metrics, often driving workers to sacrifice their own safety, health, and personal time to meet their targets.[29] What appears to be an increase in worker productivity is in fact an extraction of more effort from workers, an echo of the still more brutal violence and intense exploitation of plantation slavery, which was hidden behind clean rows of numbers in account books to be considered by distant profiteers even as it is now stored encoded in digital reports to investors.[30]

In addition to intensifying work, **automated management** radically disempowers workers who are seldom given a clear explanation of the algorithmic rules that govern their employment and have no influence over how evaluation systems are designed or implemented. Workers often do not know how the systems use data about their actions and behavior to make decisions, and have no control over data they generate. Appeals to human considerations and personal contexts are rendered impossible: At Amazon warehouses, where automated systems analyze how many seconds it takes workers to perform a task and to move from one task to another, workers who fall behind algorithmically set productivity rates 3 times in one day are automatically fired, regardless of any mitigating circumstances or how long they have worked for the company.[31]

Workers quickly recognize management-by-algorithm as profoundly dehumanizing. Andrea Dehlendorf, co-executive director of worker advocacy group United for Respect, observes that Amazon workers' central concern is the feeling of being treated like a robot—programmed and evaluated by numbers, rather than making human decisions. At the same time, by curtailing workers' autonomy, algorithmic evaluation can also undermine the quality of work. When performance is judged solely on metrics that can be quantified and evaluated by machine, critical areas of work that are not so easily quantified—the extra minutes a nurse spends reassuring a patient, the hours a freelancer spends planning a project—are given short shrift.[32] The consequences can be devastating, not only for workers, but for those they serve: Pharmacists at one corporate drugstore chain report such intense pressure to meet corporate performance metrics that they worked at unsafe speeds, making potentially fatal errors with dosages and medication types.[33]
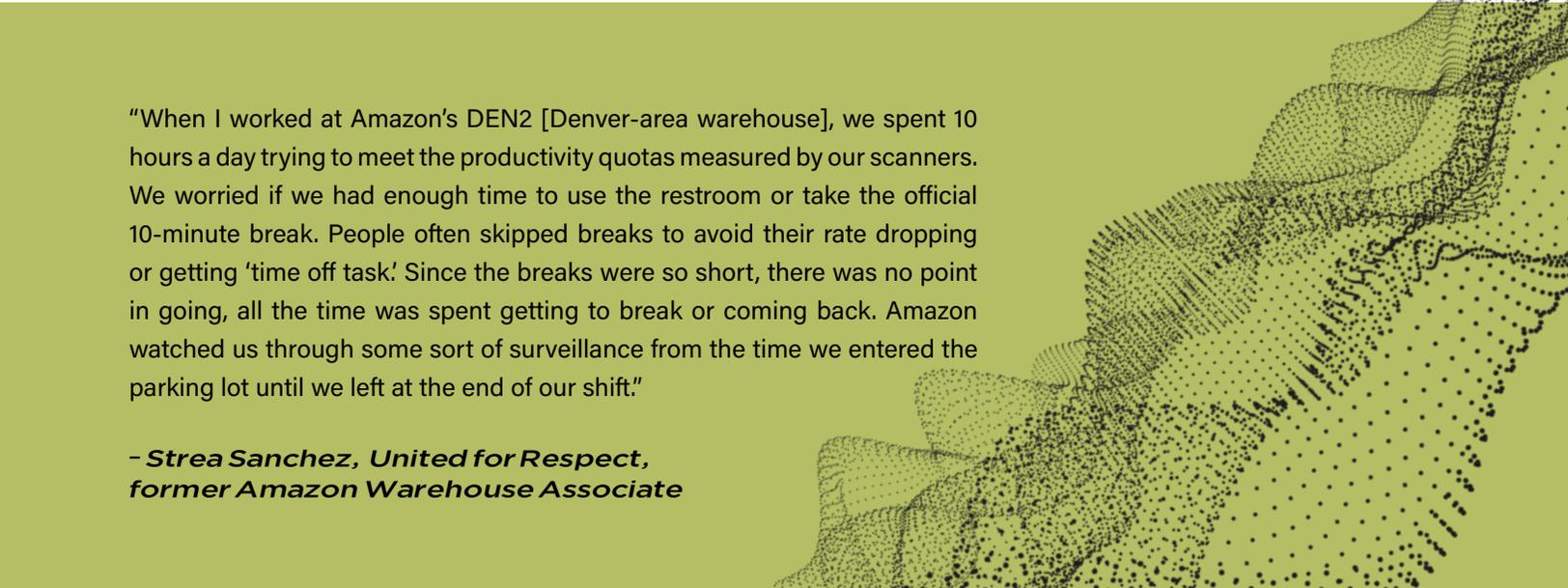
"When I worked at Amazon's DEN2 [Denver-area warehouse], we spent 10 hours a day trying to meet the productivity quotas measured by our scanners. We worried if we had enough time to use the restroom or take the official 10-minute break. People often skipped breaks to avoid their rate dropping or getting 'time off task.' Since the breaks were so short, there was no point in going, all the time was spent getting to break or coming back. Amazon watched us through some sort of surveillance from the time we entered the parking lot until we left at the end of our shift."

*– Strea Sanchez, United for Respect, former Amazon Warehouse Associate*

Data Capitalism Enables Employers to Dodge Responsibility

App-based companies such as Uber, Lyft, Instacart, Postmates, TaskRabbit, and Handy promote their platforms to workers as a way to earn a stable income while enjoying flexibility and autonomy on the job. Workers download an app on a smartphone or computer, and the company coordinates and manages piecework, connecting workers with customers.[34] While companies portray the **gig economy** as innovative and futuristic, platform companies are in fact taking advantage of surveillance technology and algorithmic management to dodge worker-protection laws and regulations, deceptively classifying the workers who perform the core operations of the business as independent contractors—even though the companies' algorithms manage and discipline workers as closely as any supervisor or boss.[35] By treating workers as independent contractors, companies can evade the taxes, safety regulations, and pay requirements involved with hiring employees.[36]

Because America's segregated economy leaves many Black and Latinx workers with few other employment options, the gig economy disproportionately employs workers of color.[37] As scholar Tressie McMillan Cottom points out, "Today, inequality—especially racial inequality—is not only produced through the job market but through people's ability to hustle [through work in the gig economy]... Black people—and Black women especially—are shut out of traditional employment, but... the platform economy is a stopgap to overcome exclusion."[38] And as Cottom recognizes, without benefits, minimum wages, worker health and safety protections, unemployment insurance, workers' compensation, overtime pay, or the stability of full-time work, gig economy employment can be dramatically more exploitative than traditional employment.

Erica Smiley, executive director of worker advocacy group Jobs with Justice, offers a gig driver's perspective: "Unlike a traditional employer, Uber says you can work whenever you want, for however long you want—but Uber won't pay for your car expenses, and they won't give you benefits. Essentially, you are just self-employed, but with a tech giant skimming 20 percent off everything you make on your own."[39] In Uber's hometown of San Francisco, most ride-hailing and delivery workers work full-time hours, but lack employer-provided health coverage and seldom get full-time pay after expenses are deducted.[40] Platform companies like Uber are profiting from the financial insecurity of their predominantly Black and brown workforce.
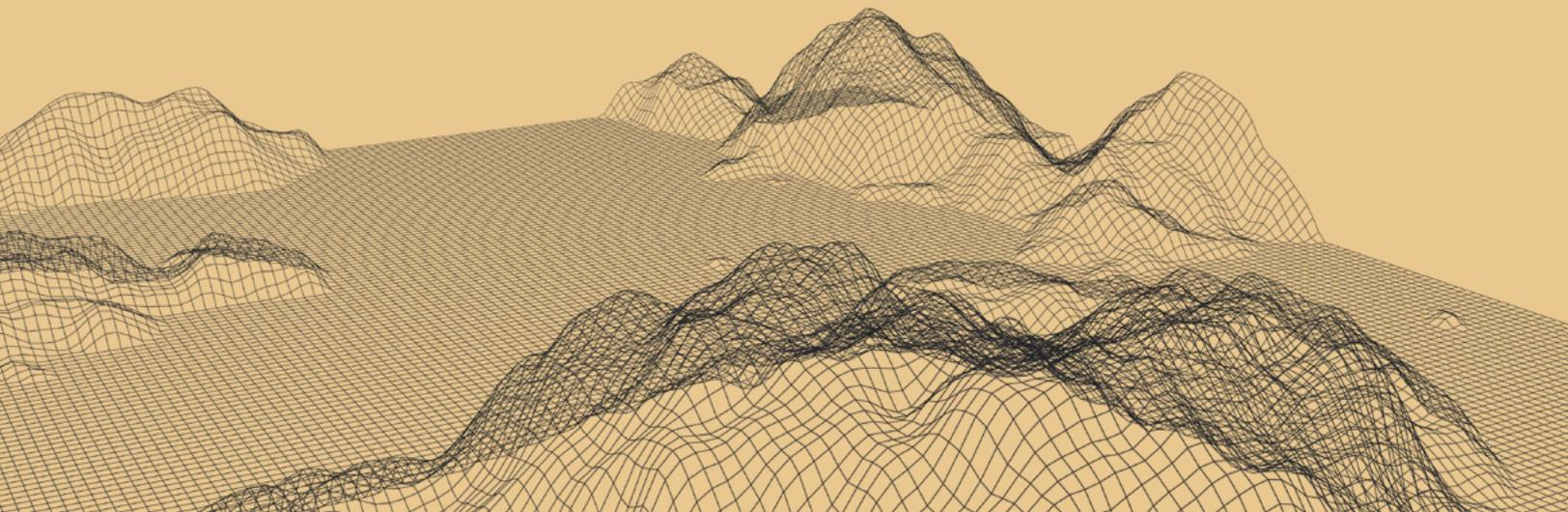
Data Capitalism in the Consumer Marketplace

The same dynamics that reinforce and magnify inequality in the workplace also operate in the consumer marketplace. What's at stake is not simply consumer privacy, or a question of who sees which digital ad for a pair of shoes, but core questions of self-determination. By design, consumer surveillance is frequently far less intrusive than monitoring in the workplace. Companies profit by extracting and monetizing consumer data without people's awareness. Actions people do not think of as market transactions—clicking on a link, sharing a photo, watching a funny video—are tracked, used to make predictions about future behavior, and sold to advertisers.

Data Capitalism Sustains Racism in the Consumer Marketplace

The buying and selling of big data and predictions does not affect everyone in the same way: Transactions occur in an environment of vast racial wealth inequality, as the typical white family in the United States has roughly 10 times more wealth than the typical Black or Latinx family.[41] Wealth disparities were fostered by historic public policies, including government redlining that discouraged lenders from offering mortgages in Black and brown neighborhoods and the post-World War II GI Bill that offered low-interest home loans and tuition grants almost exclusively to white veterans. These government policies helped to build a white middle class while systematically excluding Black and brown families from wealth-building opportunities, producing profound inequality that persists to this day.

The algorithms and automated decisions that characterize data capitalism are based on data that reflects this deeply inequitable status quo, and therefore make predictions and inform decisions that reproduce existing patterns of inequality and further entrench them. Princeton professor Ruha Benjamin has coined the term "the new Jim Code" to describe the use of big data and algorithms in ways that deepen existing racial inequalities.[42] Algorithms are advertised as being free from human bias, but because they do not address institutional or structural inequality embedded in the data they use, they exacerbate, rather than reduce, historical disparities.

Data Capitalism and Consumer Financial Products

Nowhere are the hazards more glaring than the marketplace for consumer financial products and services. When browsing online, Michelle Miller and Sam Adler-Bell observe, "those identified as financially desperate receive ads for predatory loan products and for-profit colleges, while those identified as affluent are targeted for high-paying jobs and low-interest banking products" simply because it is most profitable for companies to advertise this way.[43] The result is a feedback loop where people with less wealth—far more likely to be Black and brown people—continue to be marginalized and further excluded from wealth building, even when advertisers never explicitly target ads by race.[44]

How FICO Scores Encode Racism

*FICO credit scores are a powerful example of how historic discrimination shows up in the contemporary consumer marketplace. There has been a wealth of research on the widening gap between white and Black Americans in this country,[45] the result of a confluence of policy, practices, cultural beliefs, and the byproduct of the systematic exclusion of entire communities from economic opportunities through brute force.[46] FICO scores, since their introduction in 1989 by Fair, Isaac, and Company, have not overcome this history of bias but instead reproduce it in a different form. The inputs into the FICO algorithm, according to FICO, are payment history, amounts owed, length of credit, new credit, and credit mix. Consumer data is provided by Equifax, Experian, and TransUnion, and then fed into the FICO algorithm. But because the FICO algorithm is a **proprietary algorithm**, consumers, researchers, and advocates aren't able to verify the big data sets that are used to train the model. FICO algorithms are a black box, an algorithm devoid of transparency and without the structures of accountability necessary for individuals to challenge their outputs, yet they hold tremendous power over the lives of many Americans— deciding whether a family has access to safe and affordable housing, whether a student can qualify for a cheaper subsidized loan, or whether someone will get hired.*

According to FICO, their algorithms do not include variables for race.[47] Yet research has shown that the credit scores of Black and white Americans differ significantly, and that counties with high Black populations are more likely to have lower average credit scores than predominately white counties.[48] There is robust evidence showing that race does not explicitly need to be included, but that due to the history of how neighborhoods and municipalities are organized, the impact of redlining and segregation, a person's ZIP code becomes a proxy for race.

Data Capitalism Undermines Media Infrastructure

The lack of accountability promoted by data capitalism in the consumer marketplace appears most vividly in the realm of news, media, and the nation's key communications infrastructure. Pat Garofalo at the American Economic Liberties Project points out that Google and Facebook played a key role in undermining local newspapers by monopolizing digital ad revenue.[49] These two tech giants alone collect 60 percent of all digital ad revenue, while Amazon and a handful of other corporations receive another 15 percent. What remains is a mere 25 percent of ad revenue available to every news publication in the country.[50] Yet with no interest in providing full and accurate information, stopping misinformation, or holding power to account, Facebook and Google are inadequate substitutes for local newsrooms.

Media content decisions once made by human editors who were at least somewhat insulated from the business concerns of their media outlets are now made by algorithms designed to maximize profit. Facebook and Google (particularly via YouTube) prioritize content that is extreme or inflammatory because it is more apt to be engaged and passed along, providing more opportunities to sell ads and surveil user activity. The January 2021 attack on the U.S. Capitol Building powerfully illustrates the danger of allowing bigotry, hate speech, and misleading propaganda to flourish on social media and extremist groups to recruit unimpeded. Frequently, Black and brown communities and other vulnerable groups are the targets of hate. While activists like digital civil rights group Color of Change have had some success in pushing social media companies to take more responsibility for dealing with hateful content, companies continue to argue that they are merely platforms and cannot be held fully accountable for the content they profit from.[51]

COVID-19 Reinforces the Inequality of Data Capitalism

From "smart" thermometers that record and transmit body temperatures,[52] to contract tracing apps that reveal detailed location history,[53] thermal imaging cameras that aim to detect fevers among customers and workers at Subway restaurants,[54] and online schools that monitor students' eye movements,[55] responses to the COVID-19 pandemic have accelerated and intensified the surveillance and data mining trends associated with data capitalism.

Racial and economic disparities are also growing deeper. Amazon CEO Jeff Bezos, already the world's wealthiest man, increased his holdings by $48 billion during the first 4 months of the pandemic alone,[56] even as Amazon's warehouse employees—predominantly Black and brown workers—risked their lives to ensure people sheltering at home could have essential goods delivered.

In the absence of efforts to restructure the COVID response along more equitable lines, the impact of coronavirus is following historical patterns of structural racism, with Black, Latinx, and Native communities hit hardest by both the health impacts of the virus[57] and the resulting economic dislocation.[58] Employers are consolidating power by demanding that frontline workers complete invasive daily health questionnaires and wear wristbands that detect violations of social distancing guidelines,[59] even as major companies hide news of workplace COVID exposures and fail to provide necessary protective equipment and procedures to keep workers safe from infection.[60] Meanwhile, employers require remote workers to submit to more intense digital surveillance as they log in from home,[61] even as remote workers take on costs, such as electricity, internet service, heating, and air conditioning for their workspace, that were once paid by employers.[62]

Black and brown students are less likely to have access to the computers and reliable internet access they need for remote learning,[63] yet are more likely to face discipline if they don't comply with the demands of online education. For example, in Massachusetts, students in high-poverty, predominantly Black and Latino school districts have been disproportionately reported to the state's foster care agency for failing to log on to online classes, with some cases triggering punitive consequences for their families.[64]

Data Capitalism in the Public Sphere

In a neoliberal political environment, in which local, state, and federal governments cut back public services while privatizing and outsourcing many formerly public functions, data capitalism is deeply entrenched in the public sphere. For example, state and local governments increasingly contract with private companies to design and operate automated systems to determine eligibility for public benefits such as unemployment insurance, nutrition assistance, and Medicaid and to detect fraudulent applications. The same dynamics surface again: surveillance, algorithmic decisions made without transparency or accountability, and an amplification of inequality.

Data Capitalism and Public Benefits

In interviews with the Our Data Bodies project, 135 residents of marginalized neighborhoods in 3 major American cities describe "the experience of being forced to engage with intrusive and unsecure data-driven systems because of their membership in groups that have historically faced exploitation, discrimination, predation, and other forms of structural violence."[65] Interviewees report intrusive surveillance, being obligated to report detailed personal information about themselves in order to access basic benefits, having their lives scrutinized and evaluated while being denied key information relevant to their well-being, such as contact information for a caseworker. Applicants for public benefits describe a similar experience of dehumanization as that reported by Amazon warehouse workers: Data profiles and statistical risk models replace their human life stories in the eyes of an algorithm evaluating their eligibility for assistance needed to survive. SUNY-Albany professor Virginia Eubanks, a contributor to Our Data

Bodies, describes a larger institutional context of algorithmic determinations for public benefits. Rather than public, democratic, and accountable decision-making about how to ensure that benefits like food stamps and health care are available to all in need—or at least on-the-ground determinations made by human caseworkers able to understand and empathize with complex circumstances and work through the system—states automate systems so that key decision-making is embedded in secret and proprietary code, with disastrous consequences. For example, when the state of Indiana automated eligibility for its welfare programs, the algorithms coded every mistake in the 20-120 page application forms as a "failure to cooperate in establishing eligibility."[66] Any accident was considered the fault of the applicant, while caseworkers, who had previously worked directly with the community, were relegated to distant call centers and largely unable to help applicants navigate the system. As a result, a million applications for public benefits were denied in the first 3 years of the program, a 54 percent increase from the period before. Applicants for public benefits, among the most vulnerable people in society, were wrongfully denied even the most basic assistance, further deepening inequality.

Data Capitalism and the Criminal Legal System

Data capitalism's prevalence in the criminal legal system also deepens inequality. Through public contracts, tech companies play a growing role in mass incarceration as well as in the arrest, detention, and deportation of immigrants. Data brokers such as Thomson Reuters (parent company to Westlaw) and RELX plc (parent of LexisNexis) and surveillance and data analytics companies like Palantir and Amazon Web Services contract with law enforcement and immigration agencies to identify, track, and target people—from predominantly Black and brown youth suspected of gang affiliation[67] to immigrants, asylum seekers, and refugees who are also primarily people of color.[68] When public entities contract with private companies to harvest and aggregate data from utility bills, credit histories, social media, automated license plate trackers, and facial recognition technology, they effectively circumvent Fourth Amendment protections meant to defend individuals and communities from police abuses, while shielding law enforcement from public accountability, especially when contracts between tech companies and law enforcement are secret.[69]

Data capitalism also shows up in technology used in sentencing. **Risk assessments**, first used by insurance companies and actuaries to assess liability, have become the tools by which court systems decide prison sentences. Even without the bias of judges and other decision-makers, these outcomes mirror the disparities of our criminal justice system, where a white career criminal with a long rap sheet can be given a shorter sentence than a 15-year-old Black teenager with no prior offenses for a crime that could have easily been dealt with by a phone call home.[70] Risk assessment tools designed by private company COMPASS develop sentencing outputs by coding responses to questions; the responses become proxies for race that reinforce discrimination: "How many of your friends/ acquaintances have ever been arrested? Were you ever suspended or expelled from school? How often have you moved in the last 12 months?" In the United States, Black people make up 33 percent of the sentenced prison population despite representing just 12 percent of the U.S. population overall.[71] Black girls are 6 times as likely to be suspended as white girls, while Black boys are 3 times as likely to be suspended as white boys.[72] These same disparities feed back into risk assessment tools, multiplying bias.
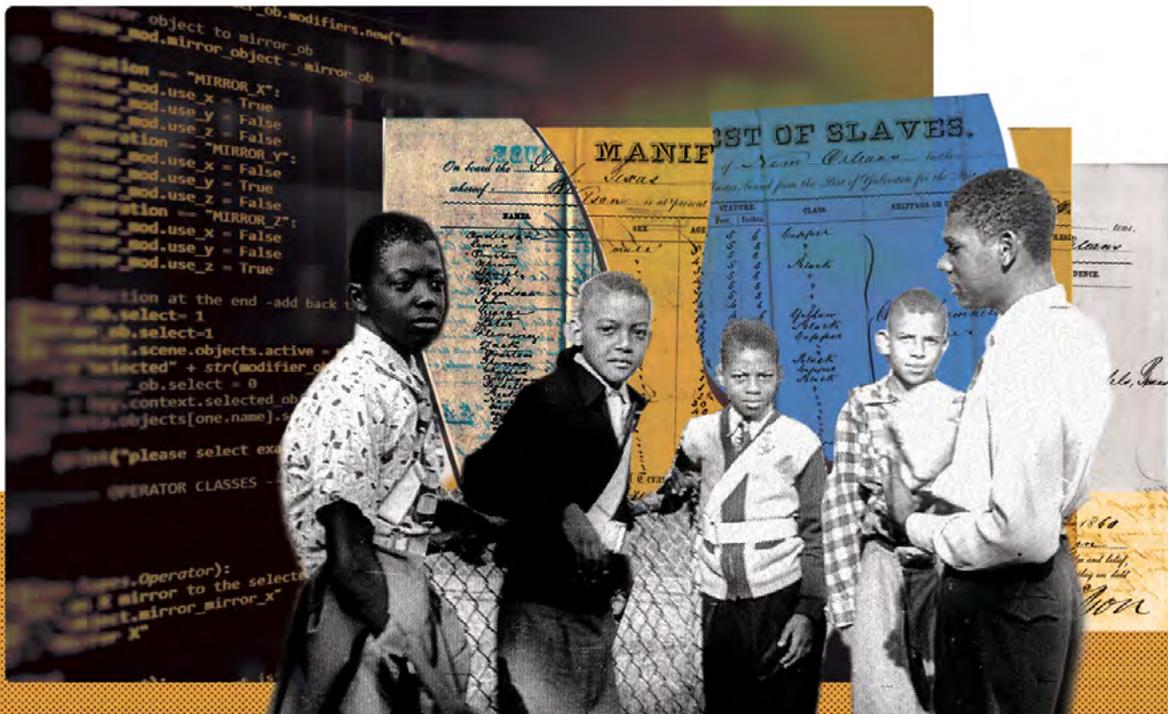
Policy to Address
Data Capitalism

Data capitalism deploys surveillance, data extraction, monetization of data, and automated decision-making to consolidate power in the hands of corporations and the wealthy, exacerbating racial and economic inequality. Policymakers who seek to address these harms cannot approach the problem as one of individual privacy to be addressed simply by giving individuals more control over their personal data. Instead, solutions must be aimed at tackling the inequality built into data capitalism by decommodifying data and building mechanisms for collective consent and democratic control over data and algorithmic decision-making. The communities most directly harmed by data capitalism, including poor people and Black and brown people, must be at the center of policymaking.

Effective policy requires a combination of 4 approaches: transparency enabling people to understand what data is being collected, and how it is being used and evaluated by algorithms; regulation, holding companies and the government accountable for the impacts of their practices and decisions; structural change, altering corporate incentives to shift the underlying business model of data capitalism; and governance, democratizing data and exerting collective control over it. All of these approaches focus on the "data" part of data capitalism; to more broadly oppose the power disparities behind capitalism and white supremacy demands additional approaches that go beyond the scope of this paper.

The menu of policy options below draws on recommendations from the Civil Rights Movement and Technology Table,[73] the Vision for Black Lives,[74] and the #NoTechforICE campaign,[75] among many other sources. It is intended as a survey of approaches to begin addressing the damage of data capitalism by focusing on giving benefits and protections to the communities that data capitalism has historically harmed the most. It is not intended to be comprehensive or to constitute a single, unifying set of policy recommendations.

A POSITIVE VISION FOR DATA

"The changes I would make would be to have data that is intentional and targeted and centering people in the middle of those decisions. So, data would be created for the people and with people as opposed to on people and against people. Data would be done in a way that is an instrument and a tool to support their uplift and the uplift of their consciousness and the quality of their lives. It would be used to map and visualize so that people's understanding was centered in coming together and being their own solutionaries. It would be places of a tool for skill sharing and learning. It would put health as a priority. It would put our children's education as a priority. It would mean that there would be no persons without housing if they so choose. It would be a pairing so we would be looking for ways to place people in homes as opposed to using data as a justification for pushing people out of homes."

-Ollie Mae, participant, Our Data Bodies Project[76]

How Transparency Addresses Data Capitalism

One reason algorithms exacerbate power imbalances is because corporations are empowered to keep them secret and unquestionable, while companies' extraction of data is designed to go unnoticed and the value of data extracted is confidential. Combatting the extreme informational asymmetry by making data extraction, monetization, and algorithmic decision-making more transparent is a first step toward effective regulation, structural change, and governance.

Black and brown people confront a long history of surveillance and the extraction of personal data for profit, stretching back to the transatlantic slave trade and continuing today through many processes, including oppressive police surveillance powered by for-profit companies. By peeling back the layers of secrecy around data extraction and algorithmic decision-making to understand how they really operate, transparency is a necessary first step for building power to reverse the one-way mirror of surveillance and secret decisions. Yet while transparency is a vital tool, it cannot shift power on its own—simply exposing contracts or revealing algorithms is not sufficient to create equity or justice unless it contributes to further regulatory, structural, or governance change.

▷ **Transparent Data:** Data extraction is intentionally designed to bypass individual awareness. Policy options that go beyond individual consent and routine clicking of "I do" to online privacy disclosures include:

›› Enable consumers to easily access all data about themselves that is gathered by platforms. Several bills before Congress, including the Consumer Online Privacy Rights Act[77] and the Online Privacy Act,[78] include this provision.

›› Mandate a consumer invoice for personal data in which companies must reveal the monetary value of data extracted from consumers/employees. This is the approach of the DASHBOARD Act.[79]

›› Require employers to disclose all workplace surveillance as well as the use of any data collected. If employee data is sold to third parties, the cost and identity of data purchasers should be revealed.

▷ **Transparent Algorithms:** Directly impacted people (including workers, consumers, and people impacted by public decisions) have a right to an explanation of automated decisions powered by algorithms. Yet the complex algorithms that power advanced artificial intelligence (AI) are difficult or impossible for humans to understand. The following policy options promote transparent and intelligible algorithms:

›› Mandate that employers notify workers of how decisions related to pay, mobility, and performance tracking are made. The Center on Privacy and Technology at Georgetown Law is developing model legislation along these lines.

›› Require algorithms used for public purposes—for example those used by cities, states, counties, and public agencies to make decisions about housing, policing, or public benefits—to be open, transparent, and subject to public debate and democratic decision-making.

›› Require audits of private algorithms deployed in a commercial setting, enabling public evaluation.

›› Various approaches aim to address the complexity of algorithms:

▪ Demand that all algorithms be fully explainable. Tech companies object that this would slow down the pace of AI innovation until explainable AI is further developed, but this tradeoff is well worth it.

▪ Require audit logs of the data fed into automated systems—if the algorithms themselves are too complex to understand, logs of data fed into them can still be analyzed.

▪ Sandra Wachter and Brent Mittelstadt propose a "right to reasonable inferences" requiring any "high risk" use of algorithms to explain beforehand "(1) why certain data form a normatively acceptable basis from which to draw inferences; (2) why these inferences are relevant and normatively acceptable for the chosen processing purpose or type of automated decision; and (3) whether the data and methods used to draw the inferences are accurate and statistically reliable."[80]

▪ The AI Now Institute calls for Algorithmic Impact Assessments focusing on the results of algorithmic decision-making, including an algorithm's impact on climate, health, and geographic displacement.[81] Assessments should also include racial equity. Assessments would be public and open to comment before algorithms are deployed.

▷ **Transparent operations:** Tech companies should be required to publicly disclose key metrics about their own operations, including the demographics of their workforce and the climate impacts, such as the use of water and energy.
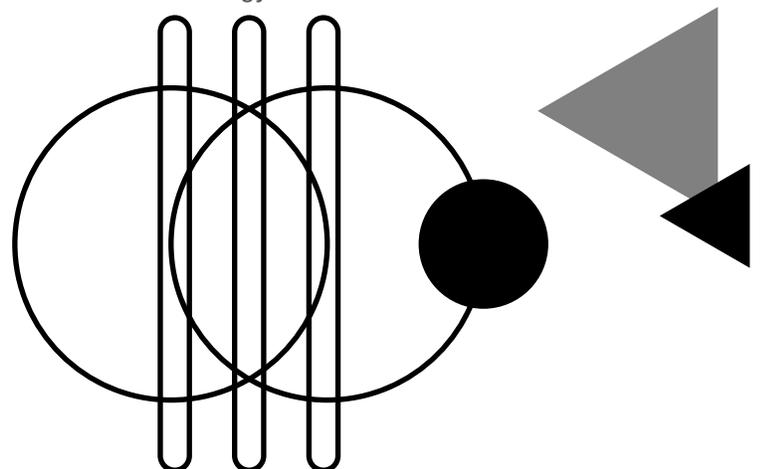
How Regulation Addresses Data Capitalism

Current laws are structured in ways that enable tech companies to evade responsibility for their actions and decisions, allowing companies to profit from surveillance, data extraction, and opaque, automated decision-making without accountability. Regulatory proposals aim to hold companies and the government accountable for the impacts of their practices and decisions. Many of the regulatory proposals below are explicitly oriented toward preventing discrimination. These can be important tools, yet because these policies do not fundamentally shift power away from corporations and to Black and brown people and communities, they leave structural racial disparities intact. Proposals that would radically reorient the business models of data firms are discussed in the following section on structural change.

▷ **Establish individual rights to access, correct, delete, and move personal information** and to opt out of having personal information transferred to third parties. These measures enhance accountability by enabling people to change or move their data away from companies. (Provisions along these lines are included in the Consumer Online Privacy Rights Act and the Online Privacy Act. California's Consumer Privacy Act[82] includes many of these rights but not the option to correct or move data.)

▷ **Prohibit using personal data to discriminate** in employment, housing, credit, education, or public accommodations on the basis of race, ethnicity, gender, disability, and other protected categories. Note that these types of discrimination are already illegal, and regulation would clarify that using big data and algorithms in ways that are discriminatory is also prohibited by law. (Provisions are included in the Consumer Online Privacy Rights Act and the Online Privacy Act.)

▷ **Require corporate assessments of automated decision systems,** including training data, for impacts on accuracy, fairness, bias, discrimination, privacy, and security, and compel companies to correct any shortcomings discovered during assessments. This is the approach of the Algorithmic Accountability Act,[83] which would direct the FTC to conduct impact assessments.

▷ **Ensure that the government's use of algorithms is fair and unbiased and provides opportunities for people to challenge processes and outcomes.** For example, the Justice in Forensic Algorithms Act[84] would ensure that corporate protection of "trade secrets" does not prevent criminal defendants and their attorneys from accessing evidence they would otherwise be entitled to. The bill would also provide defendants with a report on what software was used in their case and ensure they have access to the software so that they can test and reproduce the analysis.

▷ **Preserve net neutrality rules,** so that internet services providers cannot discriminate against certain internet communications and are prohibited from blocking, slowing down, or charging more for any type of online content.

▷ **Require platforms that distribute content, such as Facebook and Google, to take responsibility** for content as they profit from micro-targeted ads. This could include measures such as removal or mandated labeling of hate speech or hate-driven search results, rights of reply to search results, and less use of algorithms and more human judgment to edit/curate content. Writer Cory Doctorow warns that this approach may reinforce the power of the biggest tech companies, as smaller companies lack the resources to effectively moderate content.[85]

▷ **Regulate the use of data and algorithms in the workplace.** Annette Bernhardt of UC Berkeley Labor Center recommends the following broad principles:[86]

›› Workers should know about the data being gathered on them, and the purpose and impact of algorithms being used.

›› Workers should have the ability to negotiate over, and redress harms from, the use of data and algorithms in their workplaces.

›› Government oversight is necessary to ensure that employers are accountable in their use of these new technologies.

▷ **Ban some collection and uses of data outright,** for example:

›› Restrict employers' authority to collect data in the workplace.

›› Ban facial recognition and face-classifying AI that purports to determine affect, sexual orientation, propensity for crime, etc. based on facial data. The Facial Recognition and Biometric Technology Moratorium Act[87] would limit this type of surveillance.

›› The Movement for Black Lives calls for a broad "end to the long-standing monitoring and criminalization of Black people and diversion of public funds used for surveillance to meeting community needs" as well as elimination of surveillance of political activists, people seeking access to public benefits, and people working the sex trades, among other targeted communities.[88]

›› Eliminate gang databases. At minimum, people placed in gang databases must be notified and have a process to request removal.

›› Law enforcement and immigration agencies must curtail contracts with data brokers and data analytics companies that are facilitating the targeting and criminalization of immigrants and of Black and brown communities.

›› Ban certain types of hate speech, such as incitement to genocide.

›› Expand existing city and state restrictions on the use of criminal records and/or credit history for making employment decisions and ban employers from requesting social media passwords or access from employees or job applicants.

▷ **Change the demographic make-up of the tech industry itself,** so that the people designing and programming software are more reflective of those whose lives are affected by tech tools.

How Structural Change Addresses Data Capitalism

By fundamentally shifting corporate incentives, structural policies change the underlying business model of data capitalism, interrupting the consolidation of power. By disrupting corporate power, structural changes provide an opportunity to shift power to Black and brown people and communities.

▷ **Break up tech monopolies** that reduce competition and innovation and give giant companies excessive power over consumers, employees, and small businesses. After a 16-month investigation into the state of competition in the digital economy, the House Judiciary Committee's Antitrust Subcommittee released detailed recommendations to break down the dominance of Apple, Amazon, Google, and Facebook, including:[89]

›› Structurally separate monopolistic companies, prohibiting the largest platform utilities from using their power over one line of business to exert control over another one. For example, AmazonBasics, the private label that peddles home goods, office supplies, and tech accessories, should be separated into a different company from Amazon Marketplace, the exchange where these goods are sold, and Google's ad exchange and its businesses on the exchange should be separated.

›› Prohibit companies from self-preferencing, that is, leveraging their own platforms to favor certain products, effectively undercutting competitors and reinforcing their own dominance. For example, mandate that Google offer search neutrality to avoid hidden prioritization or de-prioritization of certain content.[90]

›› Require companies to make their services compatible with competing networks to allow for interoperability and data portability, for example, enabling consumers to easily move their Facebook photos and other data to a competing social network.

›› Mandate that companies provide due process to users of their platform before unilaterally changing rules and procedures. For example, businesses that sell products on Amazon should have due process rights if the company changes its policies in ways that disadvantage them.

›› Bar mergers and acquisitions in tech that reduce competition and allow dominant companies to further increase their power

·›› Improve and update existing antitrust laws, including the Clayton Act, the Sherman Act, and the Federal Trade Commission Act, to bring these laws into line with the challenges of the digital economy, and strengthen the Federal Trade Commission and the Antitrust Division of the Department of Justice to promote greater transparency and democratization within these agencies.

▷ **Ban targeted advertising.** K. Sabeel Rahman and Zephyr Teachout suggest a prohibition on targeted ads would shift the incentives of tech companies like Facebook and Google away from surveillance and unlimited data collection, the promotion of inflammatory content, and differential treatment of users that can have discriminatory impact.[91] Companies might instead make profits through non-targeted advertising or via user fees.

›› Taxing targeted ads would also change incentive structures: Timothy Karr and Craig Aaron at the Free Press propose a targeted ad tax, with revenues reinvested in public interest media and civic tech.[92]

▷ **Prevent tech companies from extending their power by taking over the financial system.** The Keep Big Tech Out Of Finance Act[93] would prevent social media companies from operating as financial institutions, being affiliated with financial institutions, or establishing or maintaining a digital currency.

▷ **Mandate that platform companies like Uber and Instacart stop dodging worker protection laws** by misclassifying their employees as independent contractors. This is a structural change rather than a regulatory tweak because it requires an underlying shift in the business model of platform companies, which are premised on treating employees as contractors. The Worker Flexibility and Small Business Protection Act presumes that workers are employees unless "(A) the individual is free from control and direction; (B) the labor is performed outside the usual course of business; and (C) the individual is engaged in an independently established business."[94] The bill penalizes companies that misclassify employees as independent contractors and holds large companies jointly responsible for worker protections at franchises and throughout their supply chain. This legislation shifts power away from companies that built a business on using surveillance and automated management to profit at workers' expense and provides greater power to working people.

How Governance Addresses Data Capitalism

All over the world, communities are grappling with the question of data governance. Here in the United States, communities that have been disenfranchised have found new ways of asserting collective self-determination by advancing demands and policy solutions that extend beyond privacy to ways to govern their data and make demands on how the data collected about them can or can't be used. These approaches would reclaim data as protest, data as accountability, data as collective action.[95] Beyond changing the business model of data capitalist firms, these proposals would make data cease to be a commodity at all, democratizing data and building mechanisms for Black and brown communities to exercise collective consent and democratic control over data and algorithmic decision-making that affects their lives.

▷ **Democratize control over the internet itself.** Publicly owned broadband networks and cloud providers operated as utilities can provide better service at a lower cost and prioritize imperatives like providing services for poor and rural communities. At minimum, the government should expand programs providing free and low-cost broadband internet to people living in public housing, subsidized housing, and rural areas. Many community groups have started their own wireless and internet infrastructures, creating an alternative to the predatory and data-extractive relationship between communities and traditional internet service providers.

›› Equitable Internet Initiative builds and maintains neighborhood-governed internet infrastructure in Detroit. The Equitable Internet Initiative also trains residents as Digital Stewards. As a Digital Steward, residents demystify technology for each other through things like intentional network build-out and design, community workshops and training, neighborhood advisory councils, and participatory design sessions with the community.[96]

›› Resilient Just Technologies in Puerto Rico creates immediate use DIY Wi-Fi networks for emergency response and recovery. Their networks are designed to be used by organizers in the racial, economic, and climate justice movements.[97]

›› Community Tech NY created the Portable Network Kit (PNK), a network in a box that can be used to connect to an existing internet connection or used offline as a local networking tool. A PNK includes "off the shelf hardware and open-source software housed in a waterproof, battery-powered, solar-enabled kit." Community Tech NY has trained residents in New York, rural Tennessee, and Detroit how to build and deploy PNKs.[98]

›› During protests at Standing Rock, water protectors and Geeks Without Bounds created an internet infrastructure that allowed people to connect at Standing Rock rather than travel 10 miles to the closest internet connection.[99]

▷ **Guarantee Indigenous data sovereignty:** the right of each Native nation to govern the collection, ownership, and application of the tribe's data.[100]

▷ **Create alternative public, not-for-profit, or worker-owned infrastructure** to compete with or replace data extraction firms. Mandating transparent code and shared data from tech monopolies would enable public or non-profit alternatives.

›› Trebor Scholz details a model of platform cooperativism in which organizations use the same technology as companies like Uber, TaskRabbit, and Airbnb but operate with a solidarity-driven worker ownership model.[101]

›› Amy Traub outlines how a democratically controlled public credit registry could replace private consumer credit bureaus like Experian, Equifax, and TransUnion in managing consumer credit information for lending purposes.[102] A similar public entity could oversee corporate credit information, replacing credit rating agencies Moody's, Standard and Poor, and Fitch, which failed spectacularly in the run-up to the Great Recession.

›› Groups like May First Movement Technology and Riseup have created alternatives for email hosting services and more.

> *May First Movement Technology* is a "democratically-run, not-for-profit cooperative of movement organizations and activists in the United States and Mexico." They have collectively owned and secured software for hosting emails and websites. Started in 2005, May First Movement Technology now has 850 members, hosts over 10,000 email addresses, and hosts over 2,000 websites on its hardware.[103]

> *Riseup* is an autonomous tech collective based in Seattle with members

worldwide that runs secure online communication tools, mostly focused on providing a secure email service. They believe that "it is vital that essential communication infrastructure be controlled by movement organizations and not corporations or the government," and their protections for users' privacy mirror that belief.[104]

▷ **Demand that extracted data can be accessed, owned, and governed by the people who produce it.** Evan Malgram describes a vision of "collective, transparent, and democratic decision-making processes... a continuous say over the manner in which data exhaust is extracted, refined, commoditized, and reinvested into any service."[105] There are several proposals for how this might work in practice:

›› Rosie Collington at Commonwealth proposes a system including a digital platform for debating and deciding priorities for use of public data and teams to estimate the value of public data.[106]

›› Evgeny Morozov and Francesca Bria suggest that cities and their residents should treat data as a public meta-utility, and should "appropriate and run collective data on people, the environment, connected objects, public transport, and energy systems as commons... in support of autonomous self-governance."[107]

›› At minimum, as San Francisco's Stop Secret Surveillance ordinance asserts, "Decisions regarding if and how surveillance technologies should be funded, acquired, or used, and whether data from such technologies should be shared, should be made only after meaningful public input has been solicited and given significant weight.[108]"

▷ **Establish data trusts.** A data trust is a structure where data is placed under the control of a board of trustees with a fiduciary responsibility to look after the interests of the beneficiaries—you, me, society. Using them offers all of us the chance of a greater say in how our data is collected, accessed, and used by others.

›› When the news broke that Facebook allowed the data of 2.1 billion users to be used to manipulate the 2016 election, Data for Black Lives led a bold effort to hold Facebook to a new standard. It was simply not enough for Facebook to make sure this never happened again, and they introduced 3 demands: 1) To develop a code of ethics that researchers and staff at Facebook must uphold, in the absence of important accountability protections such as the Institutional Review Board; 2) Hire more Black scientists and researchers; and 3) commit de-identified data to a public data trust.

›› Jasmine McNealy is developing a framework for data trusts, which would enable people to pool their data into a trust that negotiates access to pooled data and seeks compensation on their behalf. Additional similar models are also beginning to emerge.

▪ A new cooperative, MIDATA, allows members to grant selective access to their personal data for medical research. People may become members of, and thereby control, the cooperative.[110]

▪ AlgorithmWatch, European New School of Digital Studies, University of Paderborn, University of Applied Sciences Potsdam, and medialepfade. org are launching a new project called DataSkop, a platform for data donations. The donated data will be used to scrutinize algorithmic decision systems.[111]

▪ In the Netherlands in 2018, activists launched Datavakbond (which translates to Data Labor Union in English) for Facebook and Google users. Though Datavakbond has not made any noticeable progress since 2018, the plan was to have people sign up to be part of Datavakbond and be able to go to tech companies to bargain for collective rights or "strike" from the platform.[112]

▪ Driver's Seat is a data cooperative owned by gig economy workers. By downloading the Driver's Seat app, drivers can opt-in to having their data collected, which allows them to learn from their own driving data. The data is also pooled together and sold to entities like local transit departments to inform transit improvements. When Driver's Seat receives money from the sale of the data, those profits are shared amongst the driver-owners in the co-op.[113]

▷ **Empower workers to own any data related to their work,** be able to negotiate its value, share in the profits, and transfer it to new platforms. Workers should have the right to challenge all decisions made by algorithm. Workers in the tech industry should also have a right to know what they are building, and have an opportunity to contest unethical or harmful uses of their work and let the public know about it.

▷ **Enable people who work for digital platform companies to join together in cooperative organizations.** Workers at companies like Uber, TaskRabbit, and Instacart should be able to form worker-owned co-ops to provide staffing services to gig companies. As envisioned by the California Cooperative Economy Act, these staffing cooperatives would be collectively owned and democratically controlled by workers, with the power to negotiate terms of work with platform companies.[114]

Conclusion: Resisting

Data Capitalism

Data capitalism is not inevitable—in fact, it cannot exist without policies that enable it. The reality that people enjoy the convenience and connectivity of cellphones, social networks, and online shopping, banking, and entertainment does not necessarily entail the relentless consolidation of power and reinforcement of racial and economic inequality that characterize data capitalism today. Throughout the United States and across borders, the people most directly impacted by the harms of data capitalism—often Black and brown workers, consumers, community members, and students—are organizing to build power, take collective control of data and technology, and enjoy the benefits more equitably.

In recent years, organized workers have successfully used long-established tactics like strikes and work stoppages to push back against employer surveillance and control over automation. These include teachers in West Virginia who walked out during their historic 2018 strike in part to oppose mandatory personal fitness trackers[115] and predominantly Black and brown Marriott hotel workers who settled nationwide strikes after successful negotiations on issues that included workplace monitoring and automation.[116] Organizing with groups such as the Gig Workers Collective and Rideshare Drivers United, people working for platform companies like Uber and Instacart implemented work stoppages to demand better pay, improved safety,

and more autonomy.[117] And tech workers themselves are organizing: opposing both inequitable practices within their companies and the sale and use of the technological tools they develop for socially harmful purposes, such as police surveillance or immigrant detention.[118] For example, galvanized by Google's inequitable practices and policies—including the firing of artificial intelligence researcher Timnit Gebru after she criticized biases in the company's AI systems[119]—Google engineers announced formation of the Alphabet Workers Union in 2021 and initiated an international alliance with Google employees across the world.[120]

In communities throughout the United States, activists and community groups are organizing against geographic and economic displacement by tech companies—including opposition to public subsidies for corporations that siphon resources away from community needs, tech-driven gentrification that displaces lower-income Black and brown residents in favor of more affluent and whiter tech employees, and the anti-union stance of many tech companies that degrades job quality. Perhaps the best-known success is the push by activist and neighborhood groups including New York Communities for Change, Make the Road New York, and the Retail, Wholesale and Department Store union against Amazon's proposed second headquarters in Queens, New York.[121] Communities from Missoula, Montana to Plattsburg, New York have taken action against the local environmental impact of massive data centers located in their midst.[122]
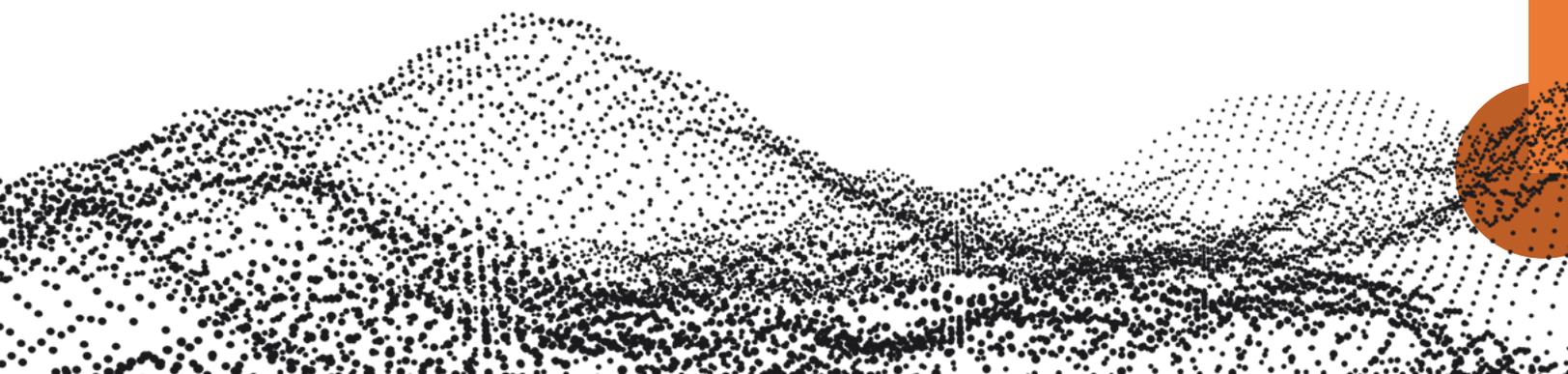
Galvanized by the Black Lives Matter movement, people across the country are organizing efforts against police surveillance and technologies like facial recognition and predictive policing algorithms that are disproportionately deployed against Black and brown residents and are more likely to identify people of color as criminal suspects and to recommend harsher sentencing. Notable successes include cities like Jackson, Mississippi and Oakland, California that have acted to ban facial recognition technology.[123] On a more local level, tenants of individual building complexes, like the predominantly-Black tenants of Atlantic Plaza Towers in Brooklyn, successfully prevented their corporate landlord from installing facial recognition technology to open the front door to their buildings.[124] More than 30 civil rights organizations, including RAICES, Color of Change, and Fight for the Future, called on lawmakers to end local police partnerships with Amazon's camera-enabled doorbell company, Ring, which facilitates even greater surveillance in Black and brown communities.[125]

Meanwhile, Latinx and Chicanx civil rights group Mijente's #NoTechForICE campaign is organizing against the use of surveillance and data technology to aid in immigration raids and mass detention, targeting tech companies that have contracts with the Border Patrol and immigration enforcement. The campaign includes student groups pledging to boycott campus recruitment efforts by tech companies that do business with ICE.[126] MediaJustice, which organizes a network fighting for racial, economic, and gender justice in the digital realm, leads campaigns to protect racial justice organizers online, expose the racial bias in high-tech policing and prisons, and demand accountability from tech platforms.[127] The Athena coalition offers another potent organizing model, bringing together organizations with an array of concerns about data capitalism—from surveillance to workers' rights to the prosperity of small business—to highlight and address the harms created by a single powerful corporation, Amazon.[128]

Color of Change's ongoing campaign for digital civil rights at Facebook is a powerful example of efforts to hold tech companies accountable for perpetuating racial injustice. The campaign mobilizes Facebook users and public opinion to push Facebook on many fronts, from curbing misinformation and voter suppression in the 2020 election to improving diversity in tech, and enforcing rules on hate speech and racist threats.[129] Civil rights advocates have also won important victories against algorithmic racism in the courts: For example, National Fair Housing Alliance led a coalition of civil rights groups negotiating a sweeping settlement with Facebook to cease the discrimination in housing, employment, and credit advertising the company enabled on its platforms.[130] And in the halls of Congress, legislators are considering not only regulations on data collection and algorithms but also renewed anti-trust measures to reduce the tremendous power of tech companies by breaking them up.[131]
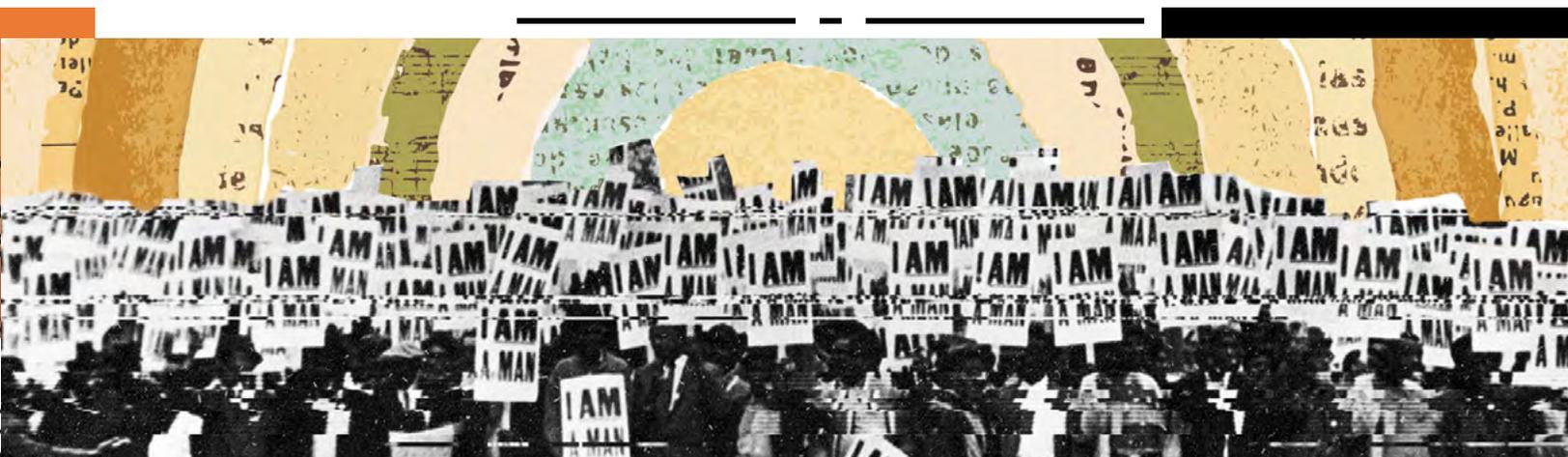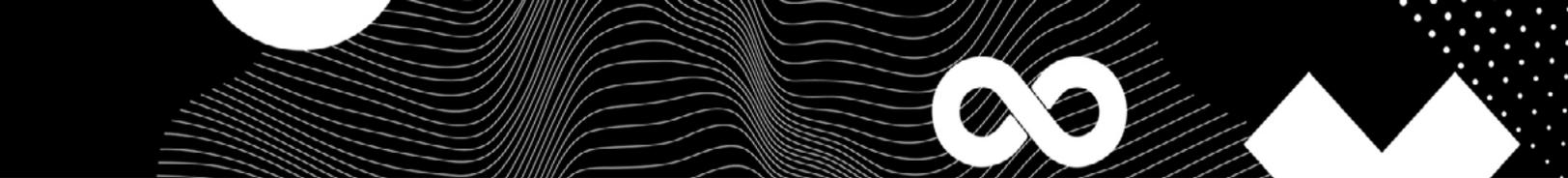
Central to the success of these efforts are the movement organizations that bring together, draw from, and generate new forms of resistance strategies to dismantle data capitalism and algorithmic racism. Formed in 2017, Data for Black Lives is a movement of over 10,000 scientists, activists, and organizers who use data and technology to make concrete change in the lives of Black people. Data for Black Lives is based on a very simple idea: that any technology is rendered invalid without the trust, consent, and collaboration of the community and the people directly impacted.

Movements like Data for Black Lives recognize that the datafication of society has enabled new forms of racism and discrimination which require new forms of activism and resistance. Through movement-building, leadership development, research, and advocacy, Data for Black Lives is making data an immense tool for social change. Building on the work of the contemporary movement to abolish prisons and the primordial social reform movement of the United States, the movement to abolish chattel slavery, Data for Black Lives has

raised a call to action: to Abolish Big Data. To Abolish Big Data in the simplest terms means to reject the structures that concentrate the power of data into the hands of a few, and to instead put the power of data into the hands of people who need it the most. Through movement building, data can be reclaimed as a tool for social change.

Developing new data technology does not inherently mean that it must be used to concentrate and consolidate power and advance white supremacy. Instead, as people—particularly Black- and brown-led organizations—build power to resist data capitalism, winning policies capable of shifting power away from companies becomes possible. In workplaces, the consumer marketplace, and the public sphere, more equitable outcomes are possible when activists, advocates, and policymakers push for and win greater transparency, regulation of harms, key structural changes to industry, and genuine shifts in the governance of data.

Glossary

▷ **Algorithm:** A series of step-by-step rules followed to make a calculation, solve a problem, or complete a task. A computer algorithm is the set of instructions telling a computer what to do.

▷ **Algorithmic racism:** The use of Big Data in ways that, intentionally or not, reproduce and spread racial disparities, shifting power and control away from Black and brown people and communities.

▷ **Artificial intelligence:** A field of computer science that aims to make computers perform tasks that traditionally required human intelligence, such as processing speech, making decisions, and recognizing faces. Machine learning is currently the dominant form of artificial intelligence.

▷ **Automated decisions/automated management:** A system that uses data and algorithms to assist with or entirely replace a decision-making process that would otherwise be implemented by human beings. In the case of automated management, this may include automatically penalizing workers who the data indicates arrived to work late, for example. Researchers at AI Now Institute point out that "All automated decision systems are designed by humans and involve some degree of human involvement in their operation. Humans are ultimately responsible for how a system receives its inputs (e.g. who collects the data that feeds into a system), how the system is used, and how a system's outputs are interpreted and acted on."[132]

▷ **Big data:** Massive data sets that can be analyzed by computers to discover trends, patterns, and associations.

▷ **Data:** Any kind of information stored in digital form. Data can include documents, pictures, videos, statistics, and other digital information.

▷ **Data capitalism:** An emerging economic model built on the extraction and commodification of data and the use of big data and algorithms as tools to concentrate and consolidate power in ways that increase economic and racial inequality.

▷ **Gig economy:** See the definition for platform company.

▷ **Machine learning:** The use, by computers, of statistics to find patterns in large amounts of data and then make predictions or decisions based on those patterns without being directly programmed to do so. Because machine learning algorithms can update themselves automatically as they encounter new data, they may produce results that are difficult for humans to understand.

▷ **Model:** A method for organizing and storing data that defines relationships between data points. Predictive models analyze existing data patterns to develop predictions about the future.

▷ **Platform company:** A business, like Uber or Instacart, that uses an online platform to connect customers and workers. Collectively, these companies are also described as the "gig economy." Rebecca Smith at the National Employment Law Project points out that companies that operate through online platforms "are not mere marketplaces: They frequently and unilaterally set pay rates, substantially control when, where, and how people work, and impose discipline on those that do not meet rigid standards that they also set unilaterally—just like traditional employers."[133]

▷ **Proprietary algorithm:** A privately owned and controlled set of computer instructions. Because proprietary algorithms are typically treated as trade secrets, companies do not publicly reveal what data they draw on or what the programming instructions are.

▷ **Proxy variable:** An easily measurable variable that is used in place of another variable that is harder to measure. Proxy variables, although useful and essential to analysis, can perpetuate racial and economic injustice when they go unchallenged and without interrogation through a historical lens.

▷ **Risk assessment:** A systematic process of identifying and evaluating the hazards and risk factors that may be involved in a potential course of action, such as insuring a person or making a business loan.

▷ **Training data:** The initial set of data used by a machine learning algorithm to find patterns.
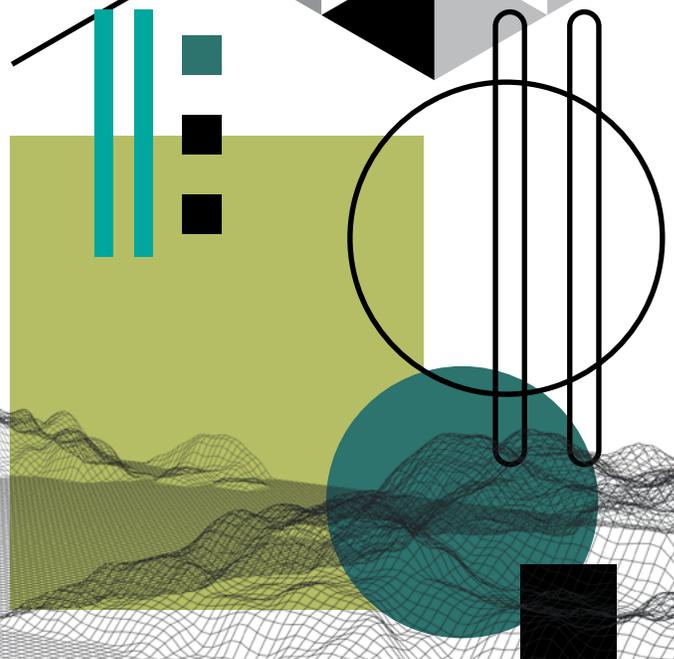
Endnotes

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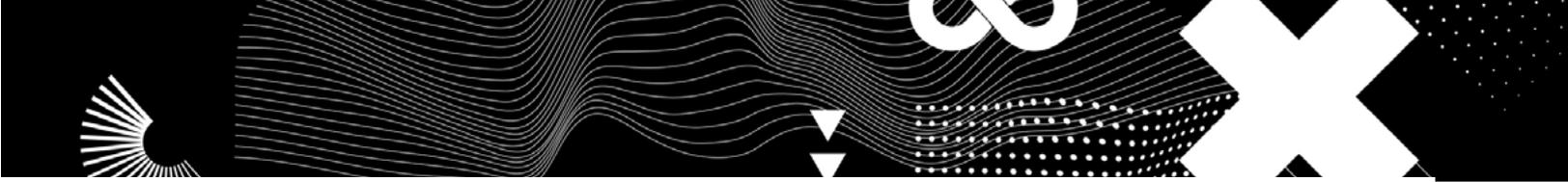
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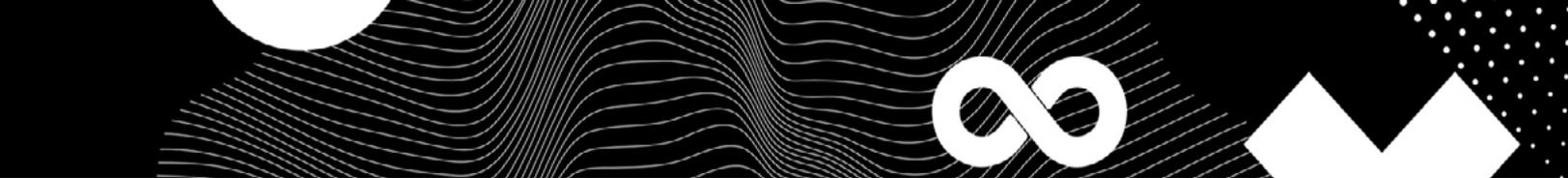
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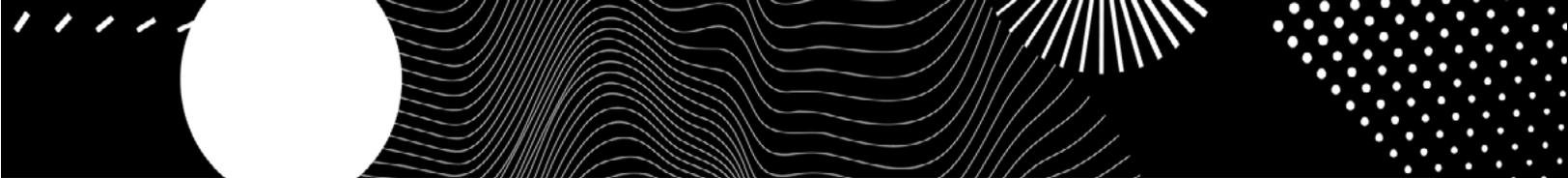
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Dēmos

Dēmos is an organization that powers the movement for a just, inclusive, multiracial democracy. Through cutting-edge policy research, inspiring litigation, and deep relationships with grassroots organizations, Dēmos champions solutions that will create a democracy and economy rooted in racial equity.

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