*"Eloquent and revelatory…. Crawford limns the dire stakes of unbridled technological expansion. Methodologically original and keenly intelligent, **Atlas of AI** is an indispensable map of the present that boldly calls readers to chart a more just and sustainable future."*
—Alondra Nelson, President of the Social Science Research Council

Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence

KATE CRAWFORD MAPS THE HIDDEN IMPACTS OF AI ON OUR WORLD

In 2021, artificial intelligence already permeates many aspects of our lives—politics, purchasing, policing, banking, social interaction, employment—in ways that are profoundly shifting how power is concentrated across the world.

Kate Crawford is a leading expert on how artificial intelligence is altering life as we know it. In *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*, to be published April 6 by Yale, Crawford reveals how the global networks underpinning AI technology are damaging the environment, entrenching inequality, and fueling a shift toward undemocratic governance. She takes us on a journey through the mining sites, factories, and vast data collections needed to make AI "work"—powerfully revealing where they are failing us and what should be done.

While technical systems present a veneer of objectivity and neutrality, Crawford shows how they are designed to serve and intensify existing systems of power. Drawing on a decade of original research, she shows how the new infrastructures of AI reflect the beliefs and perspectives of a small group of people and serve the interests of the few at the expense of the many. Addressing the concentration of power in AI is one of the most urgent challenges for the next decade, Crawford argues, and the stakes—for justice, due process, and democratic participation—could not be higher.

Kate Crawford Shows Us:

●How the AI industry requires enormous natural resources, from coal to rare earth minerals, and how the carbon footprint of planetary computation continues to grow.

●How classification systems within AI incorporate stereotypes about gender, race, trustworthiness, intelligence, criminality, and other characteristics, with the potential to exacerbate inequities in the real world.

●How emotion recognition systems, which are widely used in airport security, hiring, policing, and other settings, are founded on contested science. There is no evidence that emotions can be accurately determined by detecting facial expressions. Such systems are also known to reflect bias against marginalized groups. Yet countless startups as well as giants such as Amazon have created and continue to use and promote affect recognition systems.

●How crowd workers are the hidden labor that makes AI systems function, and are paid pennies on the dollar to label the data for the richest companies on Earth.

●How massive datasets of people's selfies, hand gestures, activities, and conversations are harvested and built without people's knowledge or consent to fuel algorithms for facial and object recognition.

●How the AI industry's effort to create and normalize its own proprietary systems is a form of colonizing that centralizes power in the AI field.

●How AI systems are currently used around the globe as a tool of state power, furthering nationalist agendas and limiting the freedom and privacy of citizens.

Although the expansion of AI into every aspect of life sometimes feels inevitable, Kate Crawford reminds us that AI remains incomplete and its future can be contested. AI is not an autonomous and spectral force, but a material technology built from resources, labor, logistics, and classification systems and designed by people to accomplish specific goals. *Atlas of AI* is a unique and powerful call to action that provides a completely new perspective on a technology that affects billions of people on the planet.

About the Author

Kate Crawford is a leading scholar of the social and political implications of artificial intelligence. Over a 20-year career, her work has focused on understanding large-scale data systems and AI in the wider contexts of history, politics, labor, and the environment. Crawford has held academic positions at universities around the world, including MIT, NYU and the University of Sydney. She is the inaugural Visiting Chair of AI and Justice at the École Normale Supérieure in Paris, a senior principal researcher at Microsoft Research and the cofounder of the AI Now Institute at NYU. Her project Anatomy of an AI System with Vladan Joler—which maps the full lifecycle of the Amazon Echo—won the Beazley Design of the Year Award in 2019 and has been acquired for the permanent collection of the Museum of Modern Art in New York. She has won international awards including the Ayrton Prize, and has advised policy makers in the United Nations, the Federal Trade Commission, the European Parliament, and the White House. Crawford's research has been published in journals such as Nature, New Media & Society, Science, Technology & Human Values, and her writing has appeared in venues such as The New York Times, Harper's Magazine, and The Wall Street Journal.

Advance Praise for <u>Atlas of AI</u>

"Eloquent, clear and profound—this volume is a classic for our times. It draws our attention away from the bright shiny objects of the new colonialism through elucidating the social, material and political dimensions of artificial intelligence."
—**Geoffrey C. Bowker, University of California, Irvine**

"A must read. Moving from lithium mines to data extraction, from labor exploitation to government surveillance, *Atlas of AI* eloquently reveals how intelligence is 'made.' It displaces anemic calls for 'ethics' with probing investigations into the environmental degradation, capital accumulation, and labor conditions that AI makes possible."
—**Wendy Hui Kyong Chun, Canada 150 Chair in New Media, Simon Fraser University**

"Artificial intelligence seems to haunt the world like a ghost in our machines. But as Kate Crawford shows in her vivid, unnerving book, this amalgam of algorithms, data, hardware is anything but immaterial. *Atlas of AI* is an outstanding contribution: the ghost of AI made visible."
—**Peter Galison, author of *Einstein's Clocks***

"By brilliantly tracing the history, mythology, ethics, and politics of artificial intelligence, *Atlas of AI* reminds us that the stories we tell about AI are just as vital as the mathematical models that comprise these systems."
—**Ruha Benjamin, author of *Race After Technology: Abolitionist Tools for the New Jim Code***

"Whether you're a devoted researcher, an AI practitioner, or a general reader concerned about the growing power of data, this is an eye-opening tour of the planetary resources, laboring bodies, and relations of power that travel under the sign of AI, lending the empire of data its unsustainable life."
—**Lucy Suchman, author of *Human-Machine Reconfigurations***

"From the extraction of labor, latex, and lithium to the politics of proxies and Palantir, *Atlas of AI* is a rigorous interrogation of the power relations that reproduce AI, and a necessary mapping of its very limits. This is an essential book."
—**Simone Browne, author of *Dark Matters: On the Surveillance of Blackness***

"Kate Crawford looks at artificial intelligence with a humanist's eye and an artist's sense of what really matters. If you think AI is all about big data and machine learning, this marvelous book will remind you: it's about the natural world, and politics, and history, and sometimes, even beauty too."
—**Fred Turner, author of *The Democratic Surround***

"Showing artificial intelligence as a technological achievement and cultural promise that spans politics, labor, land, and data, Crawford draws a unique and actionable map for seeing and challenging AI's power."
—**Mike Ananny, University of Southern California**

"An insightful excursion into the processes, implications, and ethics of data creation and manipulation in the 21st century. Ranging across terrains as diverse as mineral mines, server farms, distribution warehouses, and AI startups, Crawford shows vividly how our systems have grown to be 'dangerous when they fail and harmful when they work.'"
—**Joseph Turow, author of *The Voice Catchers***