

Unmasking AI

My Mission to Protect What Is Human in a World of Machines

By Dr. Joy Buolamwini

Guide written by Rachael Zafer

Random House

Paperback | 978-0-593-24184-4 | 336 pages | \$22.00 Also available in e-book and audio formats

ABOUT THE BOOK -

To most of us, it seems like recent developments in artificial intelligence emerged out of nowhere to pose unprecedented threats to humankind. But to Dr. Joy Buolamwini, who has been at the forefront of Al research, this moment has been a long time in the making.

After tinkering with robotics as a high school student in Memphis and then developing mobile apps in Zambia as a Fulbright fellow, Buolamwini followed her lifelong passion for computer science, engineering, and art to MIT in 2015. As a graduate student at the "Future Factory," she did groundbreaking research that exposed widespread racial and gender bias in Al services from tech giants across the world.

Unmasking AI goes beyond the headlines about existential risks produced by Big Tech. It is the remarkable story of how Buolamwini uncovered what she calls "the coded gaze"—the evidence of encoded discrimination and exclusion in tech products—and how she galvanized the movement to prevent Al harms by founding the Algorithmic Justice League. Applying an intersectional lens to both the tech industry and the research sector, she shows how racism, sexism, colorism, and ableism can overlap and render broad swaths of humanity "excoded" and therefore vulnerable in a world rapidly adopting Al tools. Computers, she reminds us, are reflections of both the aspirations and the limitations of the people who create them.

Encouraging experts and non-experts alike to join this fight, Buolamwini writes, "The rising frontier for civil rights will require algorithmic justice. Al should be for the people and by the people, not just the privileged few."

First-Year and Common **Reading Guide**



"Joy Buolamwini is a unique and powerful intellectual force, and this book explains why. We are honored to follow her on each step of her journey from an earnest and diligent grad student to an outspoken and celebrated role model for algorithmic justice, rooting for her and likewise for our combined future." -Cathy O'Neil, author of

Weapons of Math Destruction

ABOUT THE AUTHOR

DR. JOY BUOLAMWINI is the founder of the Algorithmic Justice League, a groundbreaking researcher, and a renowned speaker. Her writing has been featured in publications such as *Time*, *The New York Times*, *Harvard Business Review*, and *The Atlantic*. As the Poet of Code, she creates art to illuminate the impact of artificial intelligence on society and advises world leaders on preventing Al harms. She is the recipient of numerous awards, including the Rhodes Scholarship, the inaugural Morals & Machines Prize, and the Technological Innovation Award from the Martin Luther King Jr. Center for Nonviolent Social Change. Her MIT research on facial recognition technologies is featured in the Emmy-nominated documentary *Coded Bias*. Born in Canada to Ghanaian immigrants, Buolamwini lives in Cambridge, Massachusetts.

DISCUSSION QUESTIONS

- 1. What sparked Dr. Joy Buolamwini's interest in technology? How did her parents encourage her to explore the arts and sciences? What early interests and influences have helped shape your academic path?
- 2. How are bias and prejudice encoded into technology? How did Dr. Joy encounter the coded gaze in her work? How might your experiences using technology be impacted by your various identities?
- 3. Why did Dr. Joy initially hesitate to pursue work that focused on exclusion and discrimination? How did she reflect on her professor's question, "What will you do with your privilege?" How would you answer this question?
- 4. Why did Dr. Joy develop the Algorithmic Justice League? Who were some of the leaders and organizations that inspired her? What leaders—past and present—inspire your own goals and aspirations?
- 5. How is data used to train computers? How do researchers and developers impact machine learning? What decisions and biases can impact the development of new technology? What are some of the harms that could be caused by these types of biases?
- 6. What are power shadows? How do existing power structures influence how data is collected and shared? Why did Dr. Joy look beyond benchmark accuracy when evaluating data?
- 7. What are some examples of how artificial intelligence technology has violated user consent and privacy? How can legislation and policies protect users from unethical usage? What can you do to protect your own data from being exploited?
- 8. What are some of the negative impacts of data misclassification? What did Dr. Joy discover during her work on gender classification? How did she address the bias she discovered in Al products?
- 9. What does it mean to be excoded? Who is at risk of being harmed by AI systems? How can a deeper understanding of algorithmic bias help you protect yourself and others from this kind of harm?
- 10. How did Dr. Joy combine her passions for the humanities and sciences to become a poet of code? What challenges did she face when presenting her poetry alongside her research? What are some of your own passions and interests? How could you use your creativity to combine these interests in unconventional ways?

DISCUSSION QUESTIONS (CONTINUED)

- 11. How did Dr. Joy work to hold companies accountable for their use of facial recognition technologies? Why did some tech companies respond negatively to her research? Where did she seek protection and support? Who would be on your support team if your own work became publicly critiqued?
- 12. How can facial recognition technology be used to surveil or harm people? How were tenants in Brooklyn negatively impacted by a facial recognition entry system? How did Dr. Joy use her research and knowledge to support these tenants?
- 13. Why did Dr. Joy decide to take a break from her PhD program? Why did she ultimately decide to continue her education? How can you cultivate sources of strength and inspiration to pursue your educational and professional goals?
- 14. Why did Dr. Joy choose to participate in Olay's #DecodeTheBias campaign? Why was she initially skeptical about the impact of this campaign? How have you witnessed companies trying to impact social change? What are some of the limitations and unique advantages of corporate campaigns?
- 15. Why are public-facing audits of Al products important? What are some of the limitations of these audits? What protections do you think should exist for users of Al technology?
- 16. How was Robert Williams negatively impacted by Al? Why did Dr. Joy share his story with President Joseph Biden? How could storytelling advance change in the design and deployment of Al systems?

CLASSROOM ACTIVITIES

1. Algorithmic Bias and Protecting Your Rights

Break into two groups and assign each group one of Dr. Joy Buolamwini's TED talks:

- "How I'm fighting bias in algorithms" (November 2016): prhlink.com/buolamwinited1
- "How to protect your rights in the age of Al" (October 2023): prhlink.com/buolamwinited2

Come back to the larger group and ask the two groups to present the key points and action steps from each talk. Facilitate a discussion about the two talks that explores the following questions:

- What are some of the similarities between the two talks? How are they different?
- How did the field of technology change between 2016 to 2023?
- How has Dr. Joy's narrative about technology changed over time?

2. Poet of Code

Break into small groups and have each group select one of Dr. Joy Buolamwini's poems from *Unmasking Al*:

- "Idealistic Immigrant" (Part 1 Introduction)
- "Al, Ain't I A Woman?" (chapter 13) Watch at prhlink.com/ytaintiawoman
- "To the Brooklyn Tenants" (chapter 18)
- "Terminal Resistance" (chapter 22)
- "Unstable Desire" (chapter 24)

CLASSROOM ACTIVITIES (CONTINUED)

Ask each group to reflect on the following discussion guestions:

- What are the key points that Dr. Joy makes in each poem?
- How can poetry deepen understanding about a complex technical issue?
- How does this poem represent a key moment in Dr. Joy's journey as a poet of code?

Ask students to explore what it means to be a poet of code by creating and presenting a creative piece of their own about technology using an art form of their choice.

3. Al and the Environment

Read about the water footprint of Al (prhlink.com/waterfootprint) and the green dilemma of Al (prhlink.com/greendilemma).

Break into two groups and ask each group to research the work of Climate Change Al (www.climatechange.ai/about) and the Sinay Al (sinay.ai/en/about-us) using the following questions:

- What is the organization's mission and values? How do they accomplish their work?
- What changes is this organization calling for?

Return to the larger group and discuss each organization's vision for a more sustainable and just Al future and ways to get involved in their work.

4. Project Green Light

Watch the video introduction and interview with Tawana Petty from the "Race, Policing, and Detroit's Project Green Light" case study (prhlink.com/projectgreenlight). Facilitate a discussion about the following questions:

- How does Project Green Light use technology for community surveillance?
- What are some of the harms of this project's use of facial recognition technology?
- How is surveillance used in your own community? Are there any potential harms from this use of technology?

5. Join the Conversation

Reflect on your own place in the conversation about artificial intelligence. What decisions about new technology impact your daily life? How do tech companies have influence over your choices?

As a large group, create a list of ways that you can commit to participating in conversations and decisions about the future of Al. Which actions feel most attainable? Which actions feel more challenging? What support could help you stay engaged in the conversation about the future of Al?

RESEARCH OPPORTUNITIES

1. Biometric Rights

Learn more about how the federal government is using facial recognition technologies and the potential impact on your civil rights. Begin by reading Dr. Joy Buolamwini's testimony before the U.S. Commission on Civil Rights from March 2024 (prhlink.com/buolamwinitestimony) and researching the Freedom Flyers Campaign (fly.ajl.org). Has the TSA made any changes to its use of biometrics technology? Are there other organizations or individuals working to restrict harmful use of facial analysis, facial recognition, and remote biometric identity technologies?

2. Al Bill of Rights

Read the Blueprint for an Al Bill of Rights (prhlink.com/aibillofrights). What principles and practices are included in this blueprint to help protect your rights? What are some of the limitations of this blueprint? How does this blueprint apply to current and future laws and policies?

3. Creative Rights

Read this open letter to generative Al leaders (prhlink.com/aiopenletter) and learn about the Four Cs of creative rights (www.ajl.org/writers). What are the concerns of the authors who wrote and signed the letter? What remedies do they seek and what are the challenges involved in implementing their demands?

4. Data Colonialism

What is data colonialism and how does it impact the digital rights of people around the world? You can begin your research with Purdue University's Critical Data Studies Glossary (prhlink.com/datacolonialism). How has data been historically appropriated throughout the Global South? How have the United States and China attempted to control global digital ecosystems? What harms did CloudWalk cause in Zimbabwe?

5. Surveillance Technology

Learn about how local police departments are using surveillance technology in your community. Review a short list of surveillance technologies in the ACLU's "Community Control Over Police Surveillance: Technology 101" (prhlink.com/communitycontrol). Are there existing groups working to limit or eliminate the use of these technologies? What are some potential alternatives to these technologies?

SERVICE LEARNING PROJECTS

1. Conduct a Community Audit

Identify some of the ways that artificial intelligence is used throughout your local community. What are some of the potential limitations and harms of how artificial intelligence is being used? Who participates in and makes decisions about technological advances? Who would be considered excoded and how can you create or advocate for protections? Share your stories and findings at AJL (report.ajl.org).

2. Poetry and Technology

Host a community poetry reading inspired by Dr. Joy Buolamwini's work as a poet of code. Invite local writers to write and share work about artificial intelligence. Or invite community members to read poetry by Dr. Joy from her website (www.poetofcode.com).

3. Join Encode Justice

Learn more about the global youth movement for human-centered Al. Sign up for Encode Justice's newsletter, find a chapter in your community, or consider creating your own chapter (encodejustice.org).

4. Host a Watch Party

Host a community or virtual watch party of *Coded Bias* on Netflix. Sign up for a watch party package to receive instructions, film discussion guides, promotional materials, and resources (www.codedbias.com/watchparty).

5. Host a Book Club

Identify a group of people to read and discuss books about the social impact of technology. You can start with *Unmasking AI* and include the books referenced in the poem "To the Brooklyn Tenants" including *Automating Inequality* and *Weapons of Math Destruction*.

OTHER RESOURCES FOR STUDENTS, TEACHERS, AND PROGRAMS

- Learn more about the Algorithmic Justice League (www.ajl.org) and join their newsletter (newsletter.ajl.org)
- Watch "Al, Ain't I A Woman?" (prhlink.com/ytaintiawoman) and Voicing Erasure (prhlink.com/buolamwinipoem2)
- Watch a video of the author speaking at the 2024 Conference on The First-Year Experience® (prhlink.com/joybuolamwinivideo)
- Read Robert Williams's TIME op-ed about receiving a settlement after being misidentified by facial recognition (prhlink.com/williamstime)
- Watch the mini documentary The Coded Gaze: Unmasking Algorithmic Bias (prhlink.com/codedgaze)
- Watch the documentary Coded Bias (prhlink.com/codedbias)
- Explore the Gender Shades project website (gendershades.org)

OTHER RESOURCES FOR STUDENTS, TEACHERS, AND PROGRAMS (CONTINUED)

- Watch the demo for the UpBeat Walls MediaLab Project (prhlink.com/ upbeatwalls)
- Read "When the Robot Doesn't See Dark Skin" by Dr. Joy Buolamwini in The New York Times (prhlink.com/buolamwininyt)
- Explore the former work of the Center for Civic Media at MIT (civic.mit.edu)
- Read Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy by Cathy O'Neil (prhlink.com/ weaponsofmathdestruction)
- Learn more about Safiya U. Noble (safiyaunoble.com) and Ruha Benjamin (www.ruhabenjamin.com)
- Learn more about:
 - Center for Democracy and Technology (cdt.org)
 - Distributed Artificial Intelligence Research Institute (www.dair-institute.org)
 - The Markup (themarkup.org)

ABOUT THIS GUIDE'S WRITER

Rachael Zafer is a writer, designer, and educator who works with justice-focused individuals and organizations around the country. You can read all of her reading and discussion guides at www.rachaelzafer.com.



Penguin Random House Education 1745 Broadway, New York, NY 10019

 $\label{lem:www.commonreads.com} While www.commonreads.com \\ Queries: commonreads@penguinrandomhouse.com$





