

# CODED BIAS



A SHALINI KANTAYYA FILM



# CODED BIAS

A FILM BY SHALINI KANTAYYA

“Thought-provoking. “Coded Bias” serves as both a wake-up call (to invasive practices the public doesn’t yet realize are being implemented) and a call to action.”

*VARIETY*

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“Coded Bias takes you to the front lines of the digital revolution.”

CHICAGO  
READER

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“The best of Sundance.”  
“Dismaying and engaging.”

THE  
DENVER  
POST

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CODED BIAS

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## LOGLINE

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Coded Bias explores the fallout of MIT Media Lab researcher Joy Buolamwini's startling discovery that facial recognition does not see dark-skinned faces accurately, and her journey to push for the first-ever legislation in the U.S. to govern against bias in the algorithms that impact us all.

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## SYNOPSIS

Modern society sits at the intersection of two crucial questions: What does it mean when artificial intelligence (AI) increasingly governs our liberties? And what are the consequences for the people AI is biased against? When MIT Media Lab researcher Joy Buolamwini discovers that most facial-recognition software does not accurately identify darker-skinned faces and the faces of women, she delves into an investigation of widespread bias in algorithms. As it turns out, artificial intelligence is not neutral, and women are leading the charge to ensure our civil rights are protected.

[codedbias.com](http://codedbias.com)

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## ISSUE

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Coded Bias weaves a history of the small homogeneous group of men who defined artificial intelligence and forged the culture of Silicon Valley—a culture rapidly reshaping the world. As humans increasingly outsource decision-making to machines, algorithms already decide who gets hired, who gets health care, and who gets undue police scrutiny. Automated decisionmaking has the unprecedented power to disseminate bias at scale. Coded Bias tells the uncharted story of rebels and misfits, women mathematicians and data scientists leading the fight for ethical use of the technologies of the future.

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## ARTISTIC VISION

Coded Bias weaves personal stories, graphic elements, and lyricism to explore how bias gets encoded in the algorithms that decide the destinies of millions of people. As sci-fi writers have inspired the imagination of A.I. developers, Coded Bias draws from science-fiction stylistic elements to visualize concepts in this era of big data. Coded Bias aims inspire and engage audiences to reimagine technology and civil rights around the world.

# CODED BIAS TALENT



**Joy Buolamwini** is a poet of code who uses art and research to illuminate the social implications of artificial intelligence. She founded the Algorithmic Justice League to fight the coded gaze - harmful bias in artificial intelligence. A PhD candidate at the MIT Media Lab, she pioneered techniques that are now leading to increased transparency in the use of facial analysis technology globally. More than 230 articles in over 37 countries have been written about her Gender Shades thesis work that uncovered large accuracy disparities in commercial AI services.

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**Cathy O'Neil** is an American mathematician and the author of the blog mathbabe.org. In 2016, her book Weapons of Math Destruction was published and long-listed for the National Book Award for Nonfiction. O'Neil attended UC Berkeley as an undergraduate, received a Ph.D. in mathematics from Harvard University in 1999, and afterward held positions in the mathematics departments of MIT and Barnard College, doing research in arithmetic algebraic geometry.

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**Virginia Eubanks** is Associate Professor of Women's Studies and author of Automating Inequality. She joined the Department in 2004 after completing her Ph.D. in Science and Technology Studies at Rensselaer Polytechnic Institute. Eubanks teaches courses in public policy, research methodology, and feminist science and technology studies. She is currently engaged in a four-year National Science Foundation funded research project exploring the effects of welfare administration technologies on clients and frontline caseworkers in New York State.

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# CODED BIAS TALENT



**Dr. Safiya Umoja Noble** is an Associate Professor at UCLA in the Departments of Information Studies and African American Studies. She is the author of a best-selling book on racist and sexist algorithmic bias in commercial search engines, entitled *Algorithms of Oppression: How Search Engines Reinforce Racism* (NYU Press). She is quoted for her expertise on issues of algorithmic discrimination and technology bias by international press including *The Guardian*, the BBC, CNN International, USA Today, *Wired*, *Time*, and *The New York Times*.

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**Dr. Zeynep Tufekci** is an Associate Professor at the UNC School of Information and Library Science (SILS) and a regular contributor to the *New York Times* op-ed section and *Wired*. She has an affiliate appointment with the UNC Department of Sociology and is a faculty associate at the Harvard Berkman Klein Center for Internet and Society. She is the author of *Twitter and Teargas*. Originally from Turkey, and formerly a computer programmer, she is also increasingly known for her work on "big data" and algorithmic decision-making.

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**Silkie Carlo**, director of Big Brother Watch, is monitoring the trial use of facial recognition technology by the UK police. Prior to Big Brother Watch, she was the Senior Advocacy Officer at Liberty where she led a program on Technology and Human Rights and launched a legal challenge to the Investigatory Powers Act. She previously worked for Edward Snowden's official defense fund and whistleblowers at risk. She has worked to uphold rights in the fields of state surveillance, policing technologies, big data, artificial intelligence and free expression online. She is the coauthor of *Information Security for Journalists*.

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# CODED BIAS TALENT



**Ravi Naik**, the Law Society's 2018 Human Rights Lawyer of the Year, is a multi-award winning Partner, with a groundbreaking practice at the forefront of data rights and technology. These include the first case against Cambridge Analytica for political profiling, claims against Facebook for their data practices, challenges to financial blacklisting, through to numerous precedent setting judicial reviews. Ravi also regularly provides commentary in the media on a range of issues, including the Guardian, CNN, the Daily Mail, the BBC, WIRED, and the Telegraph.

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**Data journalist Meredith Broussard** is an assistant professor at the Arthur L. Carter Journalism Institute of New York University and the author of "Artificial Unintelligence: How Computers Misunderstand the World." She is an affiliate faculty member at the Moore Sloan Data Science Environment at the NYU Center for Data Science, a 2019 Reynolds Journalism Institute Fellow. She has also worked as a software developer at AT&T Bell Labs and the MIT Media Lab.

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# KEY PRODUCTION PERSONNEL



**Director/Producer Shalini Kantayya's** feature documentary, *Coded Bias*, premiered at the 2020 Sundance Film Festival. She directed an episode of the National Geographic television series *Breakthrough*, Executive Produced by Ron Howard, broadcast globally in 2017. Her debut feature film *Catching the Sun*, premiered at the Los Angeles Film Festival and was named a New York Times Critics' Pick. *Catching the Sun* released globally on Netflix on Earth Day 2016 with Executive Producer Leonardo DiCaprio, and was nominated for the Environmental Media Association Award for Best Documentary.

Kantayya is a TED Fellow, a William J. Fulbright Scholar, and a finalist for the ABC Disney DGA Directing Program. Kantayya finished in the top 10 out of 12,000 filmmakers on Fox's *On the Lot*, a show by Steven Spielberg in search of Hollywood's next great director. She is an Associate of the UC Berkeley Graduate School of Journalism.

[shalinikantayya.net](http://shalinikantayya.net)

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## ABOUT THE PRODUCTION COMPANY

7th Empire Media is a production company with a mission to create a culture of human rights and a sustainable planet through imaginative media that makes impact.



### FILM CONTACT

**Shalini Kantayya**  
Director, 7th Empire Media  
[shalini@7thempiremedia.com](mailto:shalini@7thempiremedia.com)  
+1.646.942.7444

### FILM PUBLICITY

**Adam J. Segal**  
The 2050 Group - Publicity  
[adam@the2050group.com](mailto:adam@the2050group.com)  
Office. 212.642.4317 | Cell. 202-422-4673

**CODED BIAS**



# CODED BIAS END CREDITS

**7th Empire Media presents**  
in association with JustFilms | Ford Foundation and Alfred P. Sloan Foundation Film Program  
a Shalini Kantayya film

## C O D E D B I A S

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**Director** Shalini Kantayya  
**Producer** Shalini Kantayya p.g.a.  
**Co-Producer** Sabine Hoffman  
**Director of Photography** Steve Acevedo  
**Editors** Alexandra Gilwit Zachary Ludescher Shalini Kantayya  
**Visual Effects** Zachary Ludescher Alexandra Gilwit  
**Original Score** Katya Mihailova

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**Post-Production Services**  
**Associate Producer**  
**Archival Research**

**Story Editors**

**Assistant Editor**  
**Additional Camera**

Dakoit Pictures  
Kathryn Henderson  
Mattie Akers  
Sheila Maniar  
Christopher Seward  
Paul Rachman  
Kurt Engfehr  
Kathleen Caldwell  
Derek Janniere  
Derek Wieseahn  
George Wieser  
Beau Grantland  
Brad Sunness  
Eric Phillips-Horst  
Wolfgang Daniels  
Gabriel Rubin  
Jen Atalla  
Bowie Alexander

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C O D E D B I A S



# CODED BIAS END CREDITS

**Audio Post Facility**  
**Supervising Sound Editor**  
**Dialog Editor**  
**Sound FX Editor**  
**Re-Recording Mixer**  
**Consulting Producer**  
**Additional Visual Effects**  
**Camera Assistant**  
**Sound Recordist**

**Live Projection Team**

**Studio**  
**First Production Assistants**

**Production Assistants**

**Voiceover Talent**  
**Dolly Services**  
**Performance Artists**

Nicole Salazar  
Splash Studios, NYC  
Peter Levin  
Barbara Parks  
Will Hsieh  
Peter Levin  
Karin Hayes  
Gavin Guerra  
Chantal Arslan  
Jim Keaney  
Mike Bono  
Ted Passon  
Jason Batcheller  
Seth Kirby  
Bill Moore  
Zach Slocum  
Ruby Bird Studios Brooklyn  
Enosa Ogbeide  
Mayukha Karnam  
Esme Isabel Auster  
Abbie Jones Hornburg  
Tate Hanyok  
Jimmy Day  
Janell Williams  
Stephanie Browne  
Rebecca Handler

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**Big Brother**

**Guitar**  
**Violin**

**Viola**

**Recording Musicians**

John Casey  
Chris Petti  
Alex Tyfer  
Eugene Grach  
Daniel Lay  
Maxim Levin

# CODED BIAS END CREDITS

## **Cello**

**Double Bass  
Piano  
Music by  
Additional Mixing  
Sound Engineer**

Marta Bagratuni  
Kumhee Lee  
Len Slutski  
Katya Mihailova  
GIGI Services  
Chris Petti  
Mike MacAllister  
Creekside Studios

## **China Unit**

**Hangzhou Field Producer  
Camera Operator  
Sound Recordist**

Casey Homovich  
Yang Yang  
Jay Wu  
He Junyi

## **United Kingdom Unit**

**London Field Producer  
Camera Operator  
Camera Assistant  
Sound Recordist  
Runner/ Driver**

Mike Beddoes  
James Heaphy  
William Hadley  
Maxmilian Skach  
Alex Purkiss  
Dana Myzer

## **South Africa Unit**

**Capetown Field Producer  
Sound Recordist**

**Fiscal Sponsor  
Bookkeeping  
Accounting  
Publicist  
Speaking Agent  
Impact Producer  
Poster Design  
Distribution Advisory Services  
Clearance Counsel**

**Distribution Counsel**

Antoinette Engel  
Zahir Isaacs

Women Make Movies  
Inga Eilenkrig  
Mainline Partners  
The 2050 Group  
Lavin Agency  
Locsi Ferra  
Pablo Londero  
Cinetic Media  
Donaldson + Callif, LLP  
Dale Nelson  
Granderson Des Rochers, LLP  
Anita Surendran, Esq.



# CODED BIAS END CREDITS

**Funding for this Project Provided by:**

Just Films | Ford Foundation

Alfred P. Sloan Foundation Film Program  
Sundance Institute Documentary Film Program

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MacArthur Foundation  
Science Sandbox  
National Geographic  
The Jerome Foundation  
Chicken & Egg Pictures

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**Featuring:**

Joy Buolamwini	LaTonya Myers
Cathy O'Neil	Tranae Moran
Meredith Broussard	Ravi Naik
Silkie Carlo	Safiya Noble
Icemaë Downes	Mona Patel
Virgina Eubanks	Deborah Raji
Griff Ferris	Daniel Santos
Manuel Victor Frederick	Mona Sloan
Timnit Gebru	Megan Smith
Mark Houldin	Kiri Soares
Jenny Jones	Zeynep Tufekci
Patric Tariq Mellet	Amy Webb

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# CODED BIAS END CREDITS

## Very Special Thanks

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Algorithmic Justice League  
Melissa Aberman  
Yemi Amu  
Shoham Arad  
Aki Hirata Baker & Family  
Shirlyn Baker  
Samantha Bates  
Julie Benello  
Anurima Bhargava  
Greg Boustead  
Lann Briel  
Andrea Brown  
Brown Girls Doc Mafia  
Zeph Capo  
Gabriel Florenz  
Yale Fox  
Kyra Gaunt  
Georgetown Center  
on Data and Privacy  
Barbara Ghammashi  
Megan Goulding  
Julia Gunnison  
Habitas  
Harvard Bookstore  
Taila Hewitt  
Nicole Hughes  
Jordan Iturbido  
Kathy Im  
Tabitha Jackson  
Grey Jabesi  
Michael Jones  
Van Jones  
Hajnal Molnar-Szakacs  
Paola Mottura  
Stanley Nelson  
Mutale Nkonde

Wandisile Nqeketho  
George Orwell  
Robert Lee Parr  
Juan Pablo Dominguez  
Lauren Pabst  
Pioneer Works  
Tom Reilly  
Rane Riley-walker  
Eric Robinson  
Cansu Safar  
Hanna Sassaman  
Eric Sears  
Neelam Sharma  
Sharda Shekaran  
David Caroll  
Seana Cavanaugh & Steve  
Huntley Center for Data  
and Society  
Sonya Childress  
Fitzroy Christian  
Tanuj Chopra  
Color of Change  
Katrina Conan  
Hannah Couchman  
Brenda Coughlin  
Diamond Crawford  
Kade Crockford  
Siyabulela Daweji  
Paul-Olivier Dehaye  
Stephanie Dinkins  
Katie Evans  
Rodney Evans  
James Ferrar  
Dawn Fraser  
Firelight Media Lab  
Samar Katnani  
Alexandra Kahn  
Jamie Kingston  
Stephanie Lechicha

Mallika Kantayya  
Mellini Kantayya  
Teru Lily Kantayya Burke  
Sean Kantayya Burke  
Mary Keil  
Quan Lateef  
Janna Levin  
Loira Limbal  
Kim Lund  
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Aleyamma Matthew  
Media Mobilizing Project  
Cara Mertes  
William Moore  
Chelsea Shields  
Cynthia e. Smith  
Eric Shiner  
Cyndi Stivers  
Morgan Swan  
Stella Tan-Torres  
Rahdi Taylor  
TED Fellows  
TED Residency  
Gretchen & Joe Trasco  
University of California,  
Los Angeles  
University of North Carolina  
Kelly Vaughn  
Angelica Vergel  
Lily Whitsitt  
Chi-hui Yang  
Yarn Labs  
Dustin Yellin  
Debra Zimmerman  
Lynne E. Zalesak



# CODED BIAS END CREDITS

## Archival Footage

CBS/Veritone  
Courtesy of Dartmouth College Library  
Courtesy of Democracy Now  
Getty Images  
Shutterstock

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## Music

***"On The Beautiful Blue Danube"***  
***"An der schönen blauen Donau", Op. 314***  
Written by Johann Strauss II  
Performed by English Session  
Orchestra

***"Clair de Lune" Suite Bergamasque***  
Written by Claude Debussy  
Performed by Katya Mihailova

***"Coded Bias" Theme Song***  
Vocals Naiika Alfred  
Mix and Mastering Chris Petti  
Lyrics by Joy Buolamwini, "AI, Ain't I a Woman"

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*This project was completed with the support of the Women Make Movies Production Assistance Program.*

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