

# JONATHAN ZONG

www.jonathanzong.com  
jonathan@jonathanzong.com

## EDUCATION

<b>Massachusetts Institute of Technology</b>	
2018–2024	Ph.D. Electrical Engineering & Computer Science Minor in Science, Technology, and Society Advisor: Arvind Satyanarayan
2018–2020	S.M. Electrical Engineering & Computer Science
<b>Princeton University</b>	
2014–2018	B.S.E. Computer Science Advisor: J. Nathan Matias Certificate in Visual Arts Advisor: David Reinfurt
<b>University of Oxford</b>	
Spring 2017	Visiting Student

## EMPLOYMENT

<b>University of Colorado Boulder, Department of Information Science</b>	
Fall 2025–	Assistant Professor
<b>Harvard University, Berkman Klein Center for Internet and Society</b>	
2024–2025	Fellow
<b>Massachusetts Institute of Technology, MIT Visualization Group</b>	
2024–2025	Postdoctoral Associate
2018–2024	Graduate Researcher
<b>Cornell University, Citizens and Technology Lab</b>	
Summer 2020	Graduate Research Fellow
<b>Google, AI UX Team</b>	
Summer 2018	UX Engineering Intern
<b>Google, Material UX Team</b>	
Summer 2017	UX Engineering Intern
<b>Linked by Air</b>	
Summer 2016	Software and Design Intern
<b>Square</b>	
Summer 2015	Software Engineering Intern
<b>Coursera</b>	
Summer 2014	Software Engineering Intern (KPCB Engineering Fellow)

## AWARDS & HONORS

2023	<b>Forbes 30 Under 30 (Science)</b>
2022	<b>MIT Morningside Academy for Design Fellowship</b> <b>MIT Prize for Open Data Honorable Mention</b> <b>Fast Company Innovation By Design Awards Finalist</b>
2020	<b>Schnitzer Prize in the Visual Arts, MIT</b>
2019	<b>Paul and Daisy Soros Fellowship for New Americans</b> <b>NSF Graduate Research Fellowship</b> <b>Hertz Foundation Fellowship Finalist</b>
2018	<b>Lucas Award in Visual Arts, Princeton University</b> <b>NSF Graduate Research Fellowship Honorable Mention</b>
2017	<b>Santos-Dumont Prize for Innovation, Princeton University</b> <b>Tau Beta Pi Scholarship</b>

	<b>Students All to Chaumont 3rd Place, Centre National du Graphisme Peter B. Lewis Summer Fund for the Arts</b>
2016	<b>Facebook Global Hackathon Finals Honorable Mention</b>
2015	<b>Greylock Partners Hackfest, 1st Place</b>
2014	<b>HackRice, 1st Place, Rice University KPCB Engineering Fellowship MIT THINK Scholars Interact Fellowship</b>
2012	<b>Eagle Scout</b>

## PUBLICATIONS

### PEER-REVIEWED PUBLICATIONS

2024. **Umwelt: Accessible Structured Editing of Multi-Modal Data Representations.** [Jonathan Zong](#), Isabella Pedraza Pineros, Mengzhu (Katie) Chen, Daniel Hajas, Arvind Satyanarayan. *ACM Conference on Human Factors in Computing Systems (ACM CHI) (Forthcoming)*.
2024. **“Customization is Key”: Reconfigurable Textual Tokens for Accessible Data Visualizations.** Shuli Jones, Isabella Pedraza Pineros, Daniel Hajas, [Jonathan Zong](#), Arvind Satyanarayan. *ACM Conference on Human Factors in Computing Systems (ACM CHI) (Forthcoming)*.
2024. **Beyond Dark Patterns: A Concept-Based Framework for Ethical Software Design.** Evan Caragay, Katherine Xiong, [Jonathan Zong](#), Daniel Jackson. *ACM Conference on Human Factors in Computing Systems (ACM CHI) (Forthcoming)*.
2024. **Data Refusal From Below: A Framework for Understanding, Evaluating, and Envisioning Refusal as Design.** [Jonathan Zong](#), J. Nathan Matias. *ACM Journal on Responsible Computing*.
2023. **Animated Vega-Lite: Unifying Animation with a Grammar of Interactive Graphics.** [Jonathan Zong](#)<sup>\*</sup>, Josh Pollock<sup>\*</sup>, Dylan Wootton, Arvind Satyanarayan. *IEEE Transactions on Visualization and Computer Graphics (IEEE VIS)*.
2022. **Rich Screen Reader Experiences for Accessible Data Visualization.** [Jonathan Zong](#)<sup>\*</sup>, Crystal Lee<sup>\*</sup>, Alan Lundgard<sup>\*</sup>, JiWoong Jang, Daniel Hajas, Arvind Satyanarayan. *Computer Graphics Forum (EuroVis)*. **Best Paper Honorable Mention**
2022. **Bartleby: Procedural and Substantive Ethics in the Design of Research Ethics Systems.** [Jonathan Zong](#), J. Nathan Matias. *Social Media + Society*.
2021. **Lyra 2: Designing Interactive Visualizations by Demonstration.** [Jonathan Zong](#), Dhiraj Barnwal, Rupayan Neogy, Arvind Satyanarayan. *IEEE Transactions on Visualization and Computer Graphics (IEEE VIS)*.
2020. **Representing Real-Time Multi-User Collaboration in Visualizations.** Rupayan Neogy, [Jonathan Zong](#), Arvind Satyanarayan. *IEEE Visualization Conference (VIS)*.
2019. **Unruly Cyborgs: The Relational Set Designs of Isamu Noguchi.** [Jonathan Zong](#). *Liminalities: A Journal of Performance Studies*.

### EDITED PUBLICATIONS

2023. **Pointing, Mutual Intelligibility, and the Seeing Subject in HCI.** [Jonathan Zong](#). *Interface Critique*.
2020. **From Individual Consent to Collective Refusal.** [Jonathan Zong](#). *ACM XRDS (Crossroads)*.

### WORKSHOPS, CONFERENCES, POSTERS, AND DEMOS

2022. **Olli: An Extensible Visualization Library for Screen Reader Accessibility.** Matt Blanco, [Jonathan Zong](#), Arvind Satyanarayan. *IEEE VIS Posters*.
2021. **Design Spaces of Domain-Specific Languages: Comparing and Contrasting Approaches in PL and HCI.** [Jonathan Zong](#)<sup>\*</sup>, Josh Pollock<sup>\*</sup>, Dylan Wootton, Arvind Satyanarayan. *PLATEAU Workshop on the Intersection of HCI and PL*.

2021. **Pointing, Mutual Intelligibility, and the Seeing Subject in HCI.** Jonathan Zong. *Computer Mouse Conference*.
2020. **The (Minimal) Persuasive Advantage of Political Video over Text.** Chloe Wittenberg, Adam Berinsky, Jonathan Zong, David Rand. *International Conference on Computational Social Science*.
2020. **Lyra: An Interface for Designing Interactive Visualizations.** Jonathan Zong, Dhiraj Barnwal, Rupayan Neogy, Arvind Satyanarayan. *Computation + Journalism Symposium*.
2020. **Collective Refusal and the Limits of Informed Consent for Data Protection.** Jonathan Zong, J. Nathan Matias. *Data & Society Contested Data Workshop*.
2018. **Automated Debriefing: Interface for Large-Scale Research Ethics.** Jonathan Zong, J. Nathan Matias. *Companion of the 2018 ACM Conference on Computer Supported Cooperative Work and Social Computing*.  
**Best Demo Award**

## THESES

2018. **Empirically Studying Research Ethics with Interface Designs for Debriefing Online Field Experiments.** *B.S.E. Thesis, Princeton University*.

## TALKS & PRESENTATIONS

### INVITED TALKS

2024. **Accessible Data Representations for Screen Reader Users.** *Quantitative and Digital Humanities Speaker Series, Emory University*.
2024. **Participation and Power in Data Collection and Analysis**  
*Information Science Seminar, University of Colorado Boulder*  
*Ethical Tech Working Group, Berkman Klein Center for Internet and Society*
2023. **Participation and Power in Data Collection and Analysis.** *Penn HCI Group, University of Pennsylvania*.
2023. **Accessible Data Visualization for Blind and Low Vision Users.** *MIT Morningside Academy for Design*.
2022. **Designing Data Representations for Embodiment and Refusal.** *Information Science Seminar, Cornell University*.
2022. **Rich Screen Reader Experiences for Accessible Data Visualization**  
*HackNY Fellowship Speaker Series*  
*Design for Assistive Technology, MIT Beaver Works Summer Institute*  
*DiverseAbilities Employee Resource Group, New York Department of Transportation*
2022. **Designing Research Ethics Systems.** *Accountable Algorithms Reading Group, Northeastern University*.
2022. **Art, Concepts, Visualizations.** *Interact Fellowship Symposium*.
2020. **Designing Systems to Theorize Collective Power.** *Digital Theory Lab, NYU Media, Culture, and Communication*.
2020. **Layered Abstractions for Interactive Visualization Design.** *Digital Structures Group, MIT Department of Architecture*.
2019. **"The Most Liberal of Arts".** *Lewis Center for the Arts, Princeton University*.
2018. **Public Accountability in Research Ethics.** *CivilServant Research Summit, MIT Media Lab*.

### CONFERENCE TALKS AND PANELS

2023. **Olli: Accessible Data Representations for Screen Reader Users.** *Information+ Conference*.
2023. **Data Refusal From Below: A Framework for Understanding, Evaluating, and Envisioning Refusal as Design.** *Panel: Resistance · AoIR 2023*.
2022. **Consent: A Research and Design Lens for Human-Computer Interaction (Panel).** *CSCW 2022*.
2020. **Public Display and Biometric Sans: Embodied Writing in the Age of Data.** *Before and Beyond Typography, Stanford University Department of History*.

2019. **In Our Own Image: The Autonomy of Artificial Bodies in Synthetic Porn.** *Panel: Internet Connection · Theorizing the Web.*

## PUBLIC SCHOLARSHIP

### OP-EDS

2019. **The Struggle to Democratize MIT.** Rodrigo Ochigame, Alan Lundgard, Alonso Espinosa Dominguez, [Jonathan Zong](#), Gabrielle Ballard, Sally Haslanger, Edmund Bertschinger, Mani Mengiste, Ruth Perry. *The Tech (MIT).*

2019. **Consent Is Not an Ethical Rubber Stamp.** Crystal Lee\*, [Jonathan Zong](#)\*. *Slate.*

2018. **Researching the Researchers: Ethics and Privacy in Institutional Research.** [Jonathan Zong](#). *Nassau Weekly.*

### CONVERSATIONS

2022. **CAPSULE No. 1.** Cammie Lee, Megan Pai.

2021. **Form, Content, Data, Bodies: Jonathan Zong and Beth Semel on Biometric Sans.** [Jonathan Zong](#), Beth Semel. *Somatosphere.*

2021. **Holly Herndon in conversation with Tabea Nixdorff and Jonathan Zong.** *Version Space.*

2018. **w-t-f: a conversation with Eric Li and Jonathan Zong.** *Lewis Center for the Arts, Princeton University.*

### DATA JOURNALISM

2021. **The Data Visualizations Behind COVID-19 Skepticism.** Crystal Lee, [Jonathan Zong](#), Anna Arpaci-Dusseau, Katherine Huang, Mateo Monterde, Ethan Nevidomsky, Tanya Yang, Anna Meurer, Soomin Chun, Arvind Satyanarayan. *MIT Visualization Group.*

## EXHIBITIONS

2023 **Surveillance: From Vision to Data.** *Collection of Historical Scientific Instruments, Harvard University.*

2020 **WRECKED ALPHABET.** *Marcel Broodthaers Society of America.*  
**BODY TEXT.** *Wiesner Gallery, MIT.*

2018 **w-t-f.** *Lucas Gallery, Princeton University.*  
**Internet Yami-Ichi.** *Rhizome, New Art Dealers Alliance.*

2017 **\*a graphic design exhibition\*.** *Princeton University and IN-FO.CO, Los Angeles.*  
**Faire Signe.** *Biennale de design graphique, Chaumont, France.*

## COLLECTIONS

2018 **Van Alan Clark, Jr. Library, School of the Museum of Fine Arts, Tufts University**  
*Everyone Should*

2016 **Graphic Arts Collection, Firestone Library, Princeton University**  
*Nap Poems*

## ART BOOK FAIRS

2019 **Tiny Tech Zines, Navel LA**  
*with Free Radicals*

2019 **Press Play, Pioneer Works**  
*with Tech Zine Fair*

2018 **Odds and Ends, Yale University**  
**Zine Soup 3.0: Makers Market, Chinatown Soup**  
**NY Tech Zine Fair, School for Poetic Computation**  
**Boston Art Book Fair, Boston Center for the Arts**

## TEACHING

### INSTRUCTOR

2020. **AI, Justice, Imagination: Technology and Speculative Fiction.** Tufts University Experimental College  
Visiting Lecturer (Adjunct) (co-instructor with Janet Zong York)

## GUEST LECTURER / SPEAKER

2023. **Crowd Sourced City: Data Activism Edition**. MIT Department of Urban Studies and Planning

2023. **Transversal Design for Social Impact**. MIT Program in Art, Culture, and Technology

2022. **Transformations in Engineering and the Arts**. Princeton University

## GUEST CRITIC

2022. **i-n-t-e-r-f-a-c-e**. Princeton University

## STUDENT MENTORSHIP

### M.ENG. STUDENTS

2023–24 Isabella Pedraza Pineros, Katie Chen

Summer 2023 Evan Caragay (**Charles & Jennifer Johnson MEng Thesis Award**), Katherine Xiong

2022–23 Shuli Jones (**David Adler MEng Thesis Award**)

2020–21 EJ Sefah, Katie Bacher

2019–20 Rupayan Neogy

### UNDERGRADUATE STUDENTS

Spring 2023 Isabella Pedraza Pineros

Fall 2022 Mufaro Makiwa

Spring/Summer 2022 Matt Blanco (Northeastern)

Summer 2021 JiWoong Jang (CMU)

Fall 2020 Anna Arpaci-Dusseau, Katherine Huang, Mateo Monterde, Ethan Nevidomsky, Tanya Yang, Anna Meurer, Soomin Chun

## SERVICE

### PEER REVIEWING

2024 ACM CHI, Research Ethics (SAGE Journal), ACM DIS, Data by Design (community review for MIT Press book), Journal of Visualization and Interaction

2023 ACM CHI, IEEE VIS, IEEE TVCG, ACM SIGGRAPH, PacificVis Visual Data Storytelling Contest

2022 ACM CHI (**Special Recognition for Outstanding Review**), IEEE VIS, Journal of Empirical Research on Human Research Ethics

2021 IEEE VIS

### OTHER ACADEMIC SERVICE

2024 Selection Committee, MIT Student Art Awards

### EVENT ORGANIZING

2022 Princeton University Workshop on Ethics of Field Experiments

### COMMUNITY BUILDING & ACTIVISM

2020–2022 MIT Graduate Student Union, Organizer

2020–2021 MIT Human-Computer Interaction, Social Committee

2019–20 MIT Students Against War

## SELECTED PRESS

### FEATURED

2024. **New software enables blind and low-vision users to create interactive, accessible charts.** *MIT News*.

2024. **Q&A: How refusal can be an act of design.** *MIT News.*

2023. **Improving accessibility of online graphics for blind users.** *MIT News.*

2023. **Student Spotlight: Jonathan Zong.** *MIT CSAIL.*

2023. **MIT MAD Fellow Improves Accessibility of Online Graphics for Blind Users.** *MIT Morningside Academy for Design.*

2023. **These tools help visually impaired scientists read data and journals.** *Nature Technology Features.*

2022. **Developing community around design.** *MIT News.*

2022. **Making data visualization more accessible for blind and low-vision individuals.** *MIT News.*

2022. **3 Questions: Designing software for research ethics.** *MIT News.*

2021. **Helping data journalists create interactive graphics.** *MIT CSAIL News.*

2020. **Forty artists elide, dismantle, and politicize the alphabet.** *Art & Education.*

2020. **Students Plumb Barriers of Sound, Space, and Sight at MIT.** *Arts at MIT.*

2020. **Bezos, Bodies, and Backprop.** *The Tech (MIT).*

2018. **PolitEcho: A Mirror for the "Daily Me".** *Frontier Magazine.*

2017. **Challenge everything you think – democracy depends on it.** *The Guardian.*

2017. **How to Escape Your Political Bubble for a Clearer View.** *The New York Times.*

2016. **This browser extension shows how biased your social media feed is.** *A.V. Club.*

2016. **Find out just how biased your Facebook feed is with this Chrome extension.** *Mashable.*

2016. **A Browser Extension That Shows You Your Filter Bubble.** *New York Magazine.*

2016. **Transformations: Students find creativity at intersection of art and engineering.** *Princeton University News.*

2013. **Houston's Hackers Gather to Help City Solve Problems.** *Xconomy.*

#### **QUOTED**

2023. **Making chemistry accessible to all.** *Dell Technologies Perspectives.*

2022. **MIT grad students vote to form labor union.** *Boston Business Journal.*

2022. **After weeks of wrangling, MIT's grad student union will come to a vote this week.** *WBUR.*

2021. **Digital exclusions: mental health and digital life.** *Our Sick Society Podcast.*

2020. **Facial Recognition Software: Masks, Ethics & The Future.** *Forbes.*

2019. **The Dark Implications of Facial Swap Filter Technology.** *Paper Magazine.*