

EDUCATION

Massachusetts Institute of Technology	
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
Princeton University	
2014–2018	B.S.E. Computer Science Advisor: J. Nathan Matias Certificate in Visual Arts Advisor: David Reinfurt
University of Oxford	
Spring 2017	Visiting Student

EMPLOYMENT

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

AWARDS & HONORS

2023	Forbes 30 Under 30 (Science)
2022	MIT Morningside Academy for Design Fellowship MIT Prize for Open Data Honorable Mention Fast Company Innovation By Design Awards Finalist
2020	Schnitzer Prize in the Visual Arts, MIT
2019	Paul and Daisy Soros Fellowship for New Americans NSF Graduate Research Fellowship Hertz Foundation Fellowship Finalist
2018	Lucas Award in Visual Arts, Princeton University NSF Graduate Research Fellowship Honorable Mention
2017	Santos-Dumont Prize for Innovation, Princeton University Tau Beta Pi Scholarship Students All to Chaumont 3rd Place, Centre National du Graphisme Peter B. Lewis Summer Fund for the Arts

2016	Facebook Global Hackathon Finals Honorable Mention
2015	Greylock Partners Hackfest, 1st Place
2014	HackRice, 1st Place, Rice University KPCB Engineering Fellowship MIT THINK Scholars Interact Fellowship
2012	Eagle Scout

PUBLICATIONS

PEER-REVIEWED PUBLICATIONS

2025. **Tactile Vega-Lite: Rapidly Prototyping Tactile Charts with Smart Defaults.** Mengzhu (Katie) Chen, Isabella Pedraza Pineros, Arvind Satyanarayan, [Jonathan Zong](#). *ACM Conference on Human Factors in Computing Systems (ACM CHI)* (Forthcoming).
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)*.
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)*.
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)*.
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](#)*, Josh Pollock*, Dylan Wootton, Arvind Satyanarayan. *IEEE Transactions on Visualization and Computer Graphics (IEEE VIS)*.
2022. **Rich Screen Reader Experiences for Accessible Data Visualization.** [Jonathan Zong](#)*, Crystal Lee*, Alan Lundgard*, 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](#)*, Josh Pollock*, 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

2024. **Designing for Participation and Power in Data Collection and Analysis.** *Ph.D. Thesis, Massachusetts Institute of Technology*.

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

TALKS & PRESENTATIONS

INVITED TALKS

Data Refusal in Conversation with *List Projects 31: Kite*

2025. MIT List Visual Arts Center

Accessible Data Representations for Screen Reader Users

2024. Fathom Information Design

2024. Quantitative and Digital Humanities Speaker Series, Emory University

Participation and Power in Data Collection and Analysis

2024. Computer Science Seminar, Brandeis University

2024. Information Science Seminar, University of Colorado Boulder

2024. Ethical Tech Working Group, Berkman Klein Center for Internet and Society

2023. Penn HCI Group, University of Pennsylvania

Accessible Data Visualization for Blind and Low Vision Users

2023. MIT Morningside Academy for Design

Designing Data Representations for Embodiment and Refusal

2022. Information Science Seminar, Cornell University

Rich Screen Reader Experiences for Accessible Data Visualization

2022. HackNY Fellowship Speaker Series

2022. Design for Assistive Technology, MIT Beaver Works Summer Institute

2022. DiverseAbilities Employee Resource Group, New York Department of Transportation

Designing Research Ethics Systems

2022. Accountable Algorithms Reading Group, Northeastern University

Art, Concepts, Visualizations

2022. Interact Fellowship Symposium

Designing Systems to Theorize Collective Power

2020. Digital Theory Lab, NYU Media, Culture, and Communication

Layered Abstractions for Interactive Visualization Design

2020. Digital Structures Group, MIT Department of Architecture

“The Most Liberal of Arts”

2019. Lewis Center for the Arts, Princeton University

Public Accountability in Research Ethics

2018. CivilServant Research Summit, MIT Media Lab

CONFERENCE TALKS AND PANELS

Olli: Accessible Data Representations for Screen Reader Users

2023. Information+ Conference

Data Refusal From Below: A Framework for Understanding, Evaluating, and Envisioning Refusal as Design

2023. Panel: Resistance · AoIR 2023

Consent: A Research and Design Lens for Human-Computer Interaction (Panel)

2022. CSCW 2022

Public Display and Biometric Sans: Embodied Writing in the Age of Data

2020. Before and Beyond Typography, Stanford University Department of History

In Our Own Image: The Autonomy of Artificial Bodies in Synthetic Porn

2019. Panel: Internet Connection · Theorizing the Web

INVITED SEMINAR PARTICIPATION

What You Hear is What You See? Integrating Sonification and Visualization

2025. Schloss Dagstuhl – Leibniz Center for Informatics

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*.

POLICY ENGAGEMENT

2024. **Respecting blind/low-vision user agency when generating AI descriptions.** [Jonathan Zong](#), Arvind Satyanarayan. *Public comment to U.S. Access Board*.

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, Assistive Technology (T&F

Journal)

- 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. **Military Eye Injuries With Risk of Cataracts and Umwelt Software For Accessible Charts.** *WYPL-FM 89.3 Eye on Vision.*
- 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.*