

## EDUCATION

### Massachusetts Institute of Technology

2018–                      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

## RESEARCH EXPERIENCE

### Visualization Group, MIT Computer Science and Artificial Intelligence Lab

2018–                      Graduate Researcher  
Advisor: Arvind Satyanarayan

### Digital Theory Lab, New York University

Nov 2020–              Affiliate

### Citizens and Technology Lab, Cornell University

Jun–Aug 2020           Graduate Research Fellow  
Mentor: J. Nathan Matias

### Center for Information Technology Policy, Princeton University

2017–2018              Undergraduate Researcher  
Advisor: J. Nathan Matias

### Oxford Internet Institute, University of Oxford

Feb–Jun 2017           Undergraduate Researcher  
Mentor: Scott Hale

### Fluid Interfaces Group, MIT Media Lab

Jan 2016                   Undergraduate Researcher  
Mentor: Tal Achituv

## WORK EXPERIENCE

### Google Research, AI UX Team

Jun–Sep 2018           UX Engineering Intern

### Google Design, Material UX Team

Jun–Sep 2017           UX Engineering Intern

### Linked by Air

Jun–Aug 2016           Software and Design Intern

### Square

Jun–Sep 2015           Software Engineering Intern

### Coursera

Jun–Aug 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	<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</b> <b>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</b> <b>KPCB Engineering Fellowship</b> <b>MIT THINK Scholars</b> <b>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).
2023. **Data Refusal From Below: A Framework for Understanding, Evaluating, and Envisioning Refusal as Design.** [Jonathan Zong](#), J. Nathan Matias. *ACM Journal on Responsible Computing*.
2022. **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*.
2020. **Representing Real-Time Multi-User Collaboration in Visualizations.** Rupayan Neogy, [Jonathan Zong](#), Arvind Satyanarayan. *IEEE Visualization Conference (VIS)*.
2020. **Lyra 2: Designing Interactive Visualizations by Demonstration.** [Jonathan Zong](#), Dhiraj Barnwal, Rupayan Neogy, Arvind Satyanarayan. *IEEE Transactions on Visualization and Computer Graphics (IEEE 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

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

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, Katherine Xiong

2022–23 Shuli Jones

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)

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

### 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

2023. **"Refusal is an Act of Design": Rethinking Data Ethics**. *MIT Morningside Academy for Design*.

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.*