Nina Lutz

ninalutz@uw.edu | ninalutz.github.io | T 480.285.9998 | Seattle, WA

Experienced researcher, instructor, and facilitator across a variety of academic and professional environments. National Science Foundation (NSF) Fellow utilizing computational and qualitative methods to investigate visual culture at scale, particularly harms of visual information and systems.

Education

University of Washington
PhD in Human Centered Design Engineering, expected 2028

Massachusetts Institute of Technology (MIT)
M.S in Media Arts and Sciences, 2021

Massachusetts Institute of Technology (MIT)
B.S in Computer Science and Engineering with Design, 2019

Work and Research Experience

Research Assistant, University of Washington   incoming Sep 2023
Incoming research assistant under Professor Kate Starbird and Professor Cecilia Aragon. Will conduct mixed methods research regarding visual mis and disinformation and its harms on intersectionality marginalized individuals, using case studies such as the US Election and how Latinx individuals are represented on the internet.

Partner, KTLN Consulting   Jun 2022 - Present
Founding partner of a mixed methods research consultancy with Dr. Katlyn Turner. Designing and conducting research interviews and surveys for landscape and systems analyses for stakeholder review and academic publications. Mentoring undergraduate researchers. Delivering interactive web artifacts and graphics for workshops. Utilizing data science and NLP methods to analyze large collections of files for clients and dovetailing with qualitative participant responses.

Associate Product Manager, Redfin   2021 - Sep 2023
Responsible for software products to ensure that customers at all prices and property types received real estate services under the Fair Housing Act. Utilized qualitative and quantitative data analysis to scope out 3 years worth of products and led a team to implementing and realizing over $6 million in revenue increases with this product line. Negotiated external vendor contracts by 25%. Designed and conducted the highest response rate (35%) survey across the company. Conducted market based experiments and statistical analyses of results. Spearheaded the integration of accessibility standards into software interfaces.

Research Assistant, MIT Media Lab   2015 - 2021
Mixed methods research and software development towards novel applications of computer vision technologies to interactive and affirming experiences for case studies in urbanism, identity, and linguistic accessibility. Managing off site deployments internationally and domestically. Mentoring undergraduate students. Scoping and executing research projects individually and in teams. Written and oral presentations at several professional and educational venues.

Graduate Fellow, MIT Undergraduate Research Opportunities Program (UROP)   ***2020-2021***
Developed institutional handbooks and training sessions for research supervisors. Held office hours and developed programming for undergraduate students trying to get into research positions.

Research Supervisor, MIT Media Lab   ***2019 - 2021***
Mentoring multiple undergraduates with their research duties and projects.

Instructor; MIT Department of Urban Planning   ***2019***
Developing courses for the new Computational Urban Science major.

Teaching Assistant, MIT   ***2016 - 2019***
Assisted with multiple courses in Computer Science, Design, and Urban Planning.

Software Engineering, Apple   ***2017***
Writing software for localization studies and services across a range of Apple products. Utilizing machine learning and various data analysis techniques to understand user trends.

Skills

Software: Java, Python, C++, C, JavaScript, Processing
Data Science: SciPy, OpenCV, Numpy, Jupyter Notebook, Tableau, QGIS, ArcGIS
Web: Javascript, CSS, Bootstrap, HTML, OpenGL, p5.js, d3.js, PostgreSQL, SQL
Research: User testing, survey design, interviewing, focus groups, grounded theory analysis
Electronics: Arduino, Eagle, PID, general electronics and controllers, circuit design
Product Management: JIRA, Google Suite, Figma, Heap Analytics
Fabrication: CAD (Rhinoceros and Grasshopper), Photoshop, Illustrator, Lightroom, InDesign, Drafting, Laser cutter, 3D Printer, CNC, Woodworking, Hand tools, Water Jet
Misc: Madmapper, Projection mapping, Optics

Publications

[In Preparation, Journal Paper] *DeCentering: A Framework for Media and Sociotechnical System Analysis.* Digital Humanities Quarterly. **N. Lutz*,** K. Turner*. 2023.

[In Preparation, Case Study] *Mixed Methods Needs and Capacity Analysis of Environmental Justice Grant Applications*. **N. Lutz**, K. Turner. 2023.

[In Preparation, White Paper] *EDF Climate Innovation and Equity, Diversity, and Inclusion: a Landscape Analysis*. K. Turner, **N. Lutz**, K. Acuff. 2023.

A Methodology For Digitally Augmented Physical Shrines. ACM CHI 2020, Workshop Paper in HCI at End of Life. April 2020. **N. Lutz.** [Presented remotely]

Colloidal Luminaries for Architectural Lighting. ACM BuildSys 2019, Demonstration Abstract. November 2019. **N. Lutz**, V. M. Bove.

Making Up the Unreal. Journal of Design and Science, MIT Press, 23 Oct. 2019. **N. Lutz.**

Routing Optimizing Algorithm for Electric Vehicles Applied in North Italy. IEEE Industrial and Commercial Power Systems Europe (2018) M Longo, P Maffezzoni, **NM Lutz**, L Daniel, X Lu.

A predictive model to support the widespread diffusion of electric mobility. IEEE International Conference on Models and Technologies for Intelligent Transportation Systems (2017). M Longo, P Maffezzoni, D Zaninelli, **NM Lutz**, L Daniel

Analysis of Tourism Dynamics and Special Events Through Mobile Phone Data . Bloomberg Data for Good Conference (2016). Y Leng, A Noriega, AS Pentland, I Winder, **N Lutz**, L Alonso.

Teaching

Invited Guest Lecturer, Gallaudet University   **2021**
Course: Advanced Digital Media (3 week subunit) **|** Professor: Max Kazemzadeh, PhD

Co-Instructor, MIT Department of Media Arts and Sciences   **Summer 2021**
Course: DeCentering: Aesthetic Labor and Performance **|** Co-Instructor: Katlyn Turner, PhD

Teaching Assistant, MIT Department of Urban Studies and Planning   **2019**
Course: 11.S187: Hack the City **|** Instructor: Yuan Lai, PhD

Co-Instructor, MIT Department of Urban Studies and Planning   **2018**
Course: 11.S195: Computational Urban Science Workshop **|** Co-Instructor: Ira Winder

Teaching Assistant, MIT Department of Architecture   **2019**
Course: 4.043: Advanced Interaction Design | Instructor: Marcelo Cohelo, PhD

Teaching Assistant, MIT Department of Media Arts and Sciences   **2016 - 2017**
Course: MAS.A19: Designing Consumer Electronics | Professor: V. Michael Bove, PhD

Exhibits, Demonstrations, Press

Exhibits:
"How have you transformed since 2020?"; Paseo Arts Festival   *Sep 2022*
Infinity Tunnel; Instruments of Vision; MIT Museum Gallery   *Dec 2019 - Mar 2020*
Turning Light; Council Arts MIT Arts on the Radar   *Sep 2019*
Connected Coral; MIT Museum   *Nov 2018 - Apr 2019*

Demonstrations:
Colloidal Luminaries; BuildSys 2019; Demonstration Award   *Oct 2019*
Bits and Bricks; IEEE FTC with Ira Winder   *Nov 2017*
MIT Media Lab Members Week   *Twice yearly, 2015 - 2021*

Press
Taos News. "Taking it back to the streets: PASEO is back, big time!"   *Sep 2022*
Hyperallergic. "A New Mexico Arts Festival Goes Full Immersive"   *Aug 2022*
New York Times. "A Portrait of U.S. Linguistic Diversity, in Sound and Sign."   *Mar 2021*

Fellowships

National Science Foundation (NSF) CSGrad4Us Fellowship   ***Awarded 2022***
This fellowship, providing the same structure as the NSF GRFP, is awarded to select working professionals seeking to pursue a PhD in Computer Science or related fields.

MIT Graduate Fellow for Undergraduate Research Office   ***2020-2021***
Inaugural fellow to develop institutional handbooks and training sessions for research supervisors and resources for undergraduates to attain research positions.

MIT Graduate Community Fellow for Institute Community Equity Office   ***2019-2020***
Assisted in graphic design and event planning for the MIT Institute Community Equity Office.

Grants, Awards

National Science Foundation (NSF) CSGrad4Us	2022
Council for the Arts MIT Schnitzer Prize Honorable Mention	*2021*
ACM SIGMOBILE Travel Grant	*2019*
ACM Best Demonstration Award BuildSys	*2019*
Council for the Arts MIT Director's Grant	*2019*
Best Demonstration at IEEE FTC	*2017*
MIT Media Lab Members Week Front Page Feature	*2016 - 2017*

Invited Talks, Presentations, Lectures, and Critique

Guest Lectures and Invited Talks:

11.S187: Hack the City	*Spring 2020*
11.526: Land Use and Transportation Planning	*Spring 2020*
Luxembourg Fashion Week	*Fall 2019*

Invited Critic:

11.S187: Hack the City	*Winter 2020*
11.205 Introduction to Spatial Analysis	*Spring 2019*
4.043: Advanced Interaction Design Studio	*Spring 2019*
11.S195: Computational Urban Science Workshop	*Spring 2018*

Undergraduate Students Advised

2021: Skylar Kolisko (Wellesley)
2019-2020: Omoruyi E Atekha (MIT, Stanford)
2019: Elliot Seaman (MIT), Jessica Wang (MIT), Mikayla Bufford (University of Madison Wisconsin, University of Michigan), Max Raven (MIT)

Service

Redfin, *Intern Mentor*	*2022*
The Paseo Project, *Instructor*	*2020-Present*
MIT Media Lab Student Committee, *Large Events Chair*	*2019-2021*
Urban Science Steering Committee, *Student Member*	*2019*
Clubes de Ciencia, ASU SciHub, *Instructor*	*2019*

Professional and personal references available upon requests