Nina M. Lutz

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Profile

Graduate student at the MIT Media Lab. Interested in bringing interactive affordances to the physical world, especially in context of social identity. Seeking opportunities to learn and engage with academics around computational, architectural, simulation, and design spaces.

Education

Massachusetts Institute of Technology
Candidate for M.S in Media Arts and Sciences

Massachusetts Institute of Technology
B.S in Computer Science and Engineering with Design

Experience

Product Manager, Redfin *2021 - Present*
Collaborating with UX research, design, and engineering to spec out new products. Enacting research and managing the execution and rollout of internal and consumer facing products on Desktop and mobile platforms. Using analysis to benchmark products and surface new findings for other product and strategy decisions. Roadmapping 1-3 year product planning, research, and priorities. Negotiating for external engineering vendors across multiple stakeholders. Presenting and writing for executive audiences across multiple departments.

Research Assistant, MIT Media Lab *2015 - 2021*
Research management and software development ranging from exhibition preparations for multiple museums, computer vision research, and interactive web art works. Managing off site deployments and sessions for a variety of academic and industrial institutes internationally and domestically. Managing and mentoring undergraduate students. Writing proposals and scoping projects in teams and for independent research for publication and exhibition. Written and oral presentations at several professional and educational venues.

Research Supervisor *2019 - 2021*
Mentoring multiple undergraduates with their research and projects, including planning, overseeing execution, and evaluation.

Instructor; MIT Department of Urban Planning *2019*
Developing a one month intensive and semester long courses. Teaching GIS data processing and computation techniques, including implementing data structures and algorithms.

Teaching Assistant *2016 - 2019*
Assisted with multiple classes in Computer Science, Design, and Urban Planning for undergraduate and graduate students.

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, Unity, Openframeworks

Web: Javascript, CSS, HTML, SQL, Ruby on Rails, three.js, OpenGL, p5.js, d3.js

Electronics: Arduino, Eagle, PID, general electronics and controllers, circuit design

Fabrication: CAD (Rhinoceros and Grasshopper), Photoshop, Illustrator, Lightroom, InDesign, Drafting, Laser cutter, 3D Printer, CNC, Woodworking, Hand tools, Water Jet

Product Management: JIRA, Google Suite, Figma, Heap Analytics

Misc: Tableu, QGIS, ArcGIS, Madmapper, Projection mapping, Optics

Publications

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

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, https://jods.mitpress.mit.edu/pub/ristj7wg. **Lutz, N.**

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

Towards an impact study of electric vehicles on the Italian electric power system using simulation techniques. IEEE 3rd International Forum on Research and Technologies for Society and Industry. M Longo, ***NM Lutz****, L Daniel, D Zaninelli, M Pruckner*

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 Instructor, Gallaudet University *2021*
Course: Advanced Digital Media
Professor: Max Kazemzadeh

Co-Instructor, MIT Department of Media Arts and Sciences *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 and Demonstrations

Exhibits:

Infinity Tunnel; Instruments of Vision; MIT Museum Gallery Dec 2019 - March 2020

Turning Light; Council Arts MIT Arts on the Radar Sept 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

Research Deployments

GSK Places Project | Upper Providence, PA | MIT Media Lab City Science *Spring 2018*
Senior software developer for an internal tool for architectural site planning at GSK. Built physical interface on site and led workshops.

GSK UK Manufacturing | Stevenage, UK | MIT Media Lab City Science *Summer 2017*
Assisted with deploying, documenting technology and front end development.

Singapore Pedestrian Accessibility | Singapore and Cambridge, MA *Summer 2016*
Assisted with developing interface that was deployed in Singapore and workshopped in Cambridge. Lead design part of workshop. Built backend and data processing of software.

Awards and Grants

Graduate Community Fellow for Institute Community Equity Office
SIGMOBILE Travel Grant
Best Demonstration Runner Up at ACM BuildSys
MIT Media Lab Members Week Front Page Feature
CAMIT Director's Grant
Best Demonstration at IEEE FTC with Ira Winder

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
Luxembourg Fashion Week

Invited Critic:
11.S187: Hack the City
11.205 Introduction to Spatial Analysis
4.043: Advanced Interaction Design Studio
11.S195: Computational Urban Science Workshop

Undergraduate Students Advised

Spring 2021: Skylar Kolisko
Spring 2020: Jennifer Zhang, Omoruyi E Atekha
Fall 2019: Omoruyi E Atekha, Sam Seaman, Jessica Wang
Summer 2019: Elliot Seaman, Jessica Wang, Mikayla Bufford (MSRP Intern)
Spring 2019: Elliot Seaman
Spring 2018: Max Raven

Committees, Community, and Outreach

Paseo instructor
Media Arts and Sciences Student Committee, *Large Events Chair* *2019-2021*
Urban Science Steering Committee, *Student Member* *2019*
Clubes de Ciencia, *Instructor* *2019*
Institute Community Equity Office Graduate Community Fellow *2018*