Nina 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. Always 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

Research Assistant; MIT Media Lab - Object Based Media 2018–Present
Working to examine the intersection between creative and display technologies. Individual research currently focusing on scattering models for alternatives to interior lighting as well as interactive, identity affirming experiences around cosmetics and technology. Group research including repairing old demonstrations and preparing an exhibition piece for the MIT Museum centered around interactive coral. Mentoring undergraduate students.

Research Assistant, MIT Media Lab - City Science; Cambridge, MA 2015 - 2018
Programming software for tangible intervention systems. Formulating math models for urban simulation. Developing algorithms to make complex systems more realistic and efficient for real time changes and interaction. Processing, analyzing, and visualizing large sets of spatial data for user intervention. Utilizing computer vision, embedded electronics, and projection mapping. Managing projects, work sessions with member companies, and off site deployments to a variety of academic and industrial institutes internationally.

Software Engineering Intern, 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.

Research Supervisor 2019 - Present
Mentoring multiple undergraduates with their research and projects.

Co-Instructor; MIT Department of Urban Planning Spring 2019
Developing a one month and sub sequentially semester long course with Ira Winder. Course taught computational urban science. Giving lectures on GIS data processing and computation techniques and data structures in Java and using software such as ArcGIS.

Teaching Assistant Fall 2016 - Spring 2019
Assisted with multiple classes. See CV for details.

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

Misc: Tableu, QGIS, ArcGIS, Madmapper, projection mapping, optics