Nina Lutz

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Profile

MIT student seeking opportunities starting Summer 2021. Passionate about achieving user and data driven solutions, especially at the nexus of visual arts and technology.

Education

Massachusetts Institute of Technology   *Expected June 2021*
Candidate for M.S in Media Arts and Sciences

Massachusetts Institute of Technology   *June 2019*
B.S. in Computer Science and Engineering with Design

Experience

Graduate Research Assistant, MIT Media Lab   *May 2018 - Present*
Developing, managing, and planning projects in teams and for independent research for publication and exhibition. Projects focusing on leveraging numerical simulation, optics, computer vision and interactive technology for experiences. Developing and designing experiences for participatory generative artworks.

Graduate Fellow, MIT Undergraduate Research Opportunities Program   *Sep 2020 - Present*
Developing and running programming and materials for effective research project planning and mentorship as part of MIT's undergraduate research opportunities program (UROP).

Research Supervisor, MIT Media Lab   *Jan 2018 - Aug 2020*
Mentoring 2-3 undergraduates each term conducting research and independent projects.

Research Assistant, MIT Media Lab   *Nov 2015 - May 2018*
Managed projects and sessions with collaborators, and off site deployments to a variety of academic and industrial institutes internationally and domestically. Programmed software for tangible intervention systems. Formulated math models for urban simulation. Developed 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. Utilized computer vision, embedded electronics, and projection mapping.

Co-Instructor; MIT Department of Urban Planning Spring   *Jan 2019 - June 2019*
Developed one month intensive and full semester courses with Ira Winder. Courses taught computational urban science. Giving lectures on GIS data processing and computation techniques, including implementing data structures and algorithms in Java and GIS tools.

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

Teaching Assistant, MIT   *Sept 2016 - June 2019*
Taught and prepared material for multiple classes in Computer Science, Design, and Urban Planning for undergraduate and graduate students. Managed students in fabrication spaces.

Skills

Software: Java, Python, C++, C, JavaScript, Processing, Unity, openFrameworks, OpenGL

Web: Javascript, CSS, Bootstrap, HTML, three.js, WebGL, p5.js, d3.js, Django, Heroku

Electronics: Arduino, Eagle, PID, General electronics and controllers, Circuit design

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

Data Science: Jupyter, R, Stata, SQL, AWS, Postgres, Redis, Statistics, NumPy, pandas, Tableau

Simulation/Learning: Caffe, Keras, TensorFlow, scikit-learn, MATLAB, OpenCV, SciPy

Misc: QGIS, ArcGIS, MadMapper, Projection mapping, Optics, Architectural drafting