

# MATTHEW LICHTENBERG

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## EDUCATION

### Brown University

Bachelor of Science

Providence RI

Graduated May 2021

- Double Major in Applied Mathematics and Materials Engineering (ABET accredited)

(GPA 3.41)

## SKILLS

- **Programming and Scripting:** Python, Bash, MATLAB, SQL
- **Software Systems:** Git, GitHub, Linux, Unix, Microsoft Office, Agile, Selenium
- **Hardware Quality Control:** Oscilloscopes, RF Probes, SPC, Six Sigma Yellow Belt

## WORK AND INTERNSHIP EXPERIENCE

### NXP Semiconductor

Device Engineer

Chandler AZ

July 2021 to Present

- Designed and created autonomous data pipeline and control algorithms to reduce product cycle time by a mean of 25 hours.
- Analyze unit and process data to discover time series trends and enhance product yield.
- Designed electrical test structures and probing test plans for process monitoring on new semiconductor products.
- Automated scripts with Selenium and Python for testing web systems

### Brown University

Head Teaching Assistant

Providence RI

Sept 2019 to May 2021

- Managed and taught "Electricity and Magnetism" and "Electric Circuits and Signals" courses, including lab sections
- Developed 4 new lab projects for the ECS curriculum so students could complete labs remotely during the pandemic
- Helped students debug their hardware during lab sections and taught concepts during office hours

### Texas A&M University Department of Mechanical Engineering, INVENT Lab

REU Machine Learning Intern

College Station TX

May 2020 to Aug 2020

- Designed and evaluated deep learning computer vision algorithms for imaging contact in between fingers and touchscreen glass.
- Developed Deep Learning Neural Networks to differentiate skin from water droplets for imaging analysis with over 99% accuracy.

### Brown University School of Engineering

Engineering Research Assistant

Providence, RI

April 2018 to March 2020

- Built MATLAB application to perform nonlinear least squares regression to compute stress in thin film materials.
- Created thin film semiconductor material by redesigning and constructing Physical Vapor Deposition tool.
- Developed and analyzed thermodynamics and kinetics of Iodine corrosion process to convert Copper to Copper Iodide.
- Performed SEM and Hall effect measurements to evaluate semiconductor structure and performance.

### AmeriCorps NCCC

Corps Member

Sacramento, CA

Oct 2016 to July 2017

- Served over 1,700 hours of community service over ten months.
- Provided Hurricane Matthew Disaster relief to over 1,200 people and assessed damages.
- Built and maintained over 5 miles of new and existing trail at national and local parks in CA.

### Kinima.fit

Front End Software Intern

Stamford, CT

June 2016 to Sept 2016

- Developed User Interface with Unity at exercise app start up that tracks body motion.
- Programmed software to recognize four new exercise motion cycles and doubled the size of the workout selection library.

## AWARDS

- Congressional Medal of Service Award: Recognition for Americorps National Civilian Community Corps
- Neal B. Mitchell '58 Systems Thinking Award: Brown University recognition of Physical Vapor Deposition Systems research.
- National Science Foundation Grant: For study of applied deep learning at Texas AM University.
- Intel and Google Science Fairs: national awards for independent research including Google Finalist in Americas
- First author on conference paper on Biodiesel fuel exhausts presented to the Eastern States Combustion Institute in Spring 2016

## LEADERSHIP EXPERIENCE AND ACTIVITIES

- Fall 2018 to Fall 2020 - Leader of Brown Engineering Department Undergraduate Group (ENGN DUG).
- Spring 2019 to Spring 2020 - Founding Member and President of Brown's Tabletop RPG Club.
- Spring 2020 to Fall 2021 - Financial chair of the Materials Research Society chapter at Brown.
- Fall 2020 to Fall 2021 - Financial chair for Brown Table, Brown's general board game club