JULIA ESTRIN

ELECTRICAL & COMPUTER ENGINEER

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EDUCATION

NORTHEASTERN UNIVERSITY

Bachelor of Electrical and Computer Engineering, 2022
GPA: 3.94
Relevant Courses: Wireless Communication Circuits, Digital Logic Design, Electronics, Electromagnetism, Sustainable Energy Systems, Linear Systems, Algorithms, Networks, Circuits & Signals, Embedded Design

ENGINEERING PROJECTS

COMMAND SHAPING FPGA PROFILING

Desktop Metal | Burlington, MA

- Formulated logical function in Verilog and initialized hardware for an FPGA to execute digital signal processing, increasing metal printer speed
- Constructed external add-on device for quick implementation of FPGA code to existing system

LOW-RESOURCE INFANT TRANSPORT INCUBATOR

Rubavu District Hospital | Gisenyi, Rwanda

- Worked with the community to identify probable causes of death in NICU with higher than average mortality rate
- Salvaged discarded equipment and household items to create an infant transport incubator, reducing hypothermia rates and vibrational trauma

ACTIVITIES

- **Vice President, IEEE Eta Kappa Nu**
  - Manage member peer tutoring in electrical engineering fundamentals and organize professional development events for our 150 student team
  - Coordinated Annual Student Leadership Conference at Tufts University, introducing students to a wide variety of employers, IEEE resources, and hands-on engineering activities
- **Engineer, Generate Product Development Studio**
  - In design stages of an IoT post-surgical Drainage Bag
- **Officer, IEEE Northeastern**
- **Winner, Husky Health Case Competition**
- **Mentor, DreamFar Running Club**
  - Training along side high school students for marathon
- **Northeastern Club Triathlon**
- **President, Biomedical Engineering Society**
  - Led executive and general board members, acted as a liaison between BioE staff and student members
  - Managed planning team for bi-annual Co-op and Career Fair held at Northeastern, including over two dozen companies

WORK EXPERIENCE

ELECTRICAL ENGINEERING CO-OP

Desktop Metal | Burlington, MA Jun - Dec 2019
A leader in metal 3D printing, reinventing the way metal parts are prototyped and manufactured

- Designed schematics and PCBs for the main printer board functional test fixture, creating an automated and error-free post manufacturing QA process
- Provided electrical aid and guidance for six other projects across four mechanical and materials science teams

PEER TUTOR

Student Athlete Support | Boston, MA Jan - May 2019

- Contributed to a student athlete's academic success in Circuits and Signals, Embedded Design, and Networks

BIOMEDICAL ENGINEERING TECHNICIAN

Rubavu Hospital | Gisenyi, Rwanda Jun - Aug 2018
Engineering World Health aims to improve healthcare delivery though connecting Engineers to low income communities

- Performed electrical/mechanical repairs to return more than 30 pieces of medical equipment to service
- Sourced and obtained oxygen regulators, decreasing neonatal mortality due to hypoxia
- Designed and implemented a straightforward identification system for fill-level of oxygen cylinders

RESEARCH ASSISTANT

Northeastern University | Boston, MA Jan - May 2018
Applied (Bio)mechanics and Tribology Laboratory, specializing in simulating bone healing and mandible remodeling

- Constructed three-dimensional models of jaws from CT scans of individuals who underwent an oral procedure, providing evidence of bone progress
- Took measurements of my models for patients pre and post-procedure to quantify changes in bone structure

ENGINEERING INTERN

Airworks | Cambridge, MA Jun - Aug 2017
Startup engineering company specializing in aerial mapping and 3D modeling at survey-grade accuracy using UAVs

- Qualified the current drone market and benchmarked hundreds of competitors' use of and success with drone technology, facilitating a shift to 3D land modeling technology

SKILLS

Software: Altium, Verilog, C++, Linux, MATLAB, PSpice, Python, LabView, G-Code, AutoCAD, SolidWorks
Applications: Soldering, Oscilloscope, Logic Analyzer, Function Generator, NI-Modules, Raspberry Pi, Basic Shop Skills
Languages: Fluent in Russian, proficient in French