JULIA ESTRIN

(617) – 974 – 2839
estrin.j@northeastern.edu

731 Parker St, Apt 2
Boston, MA 02120

EDUCATION

BS Northeastern University, Boston MA — May 2022
Electrical and Computer Engineering
GPA 3.95/4

Relevant Coursework: Power Electronics, Wireless Communication Circuits, Digital Logic Design, Noise and Stochastic Processes, Electronics, Electromagnetism, Linear Systems, Algorithms, Networks, Circuits & Signals, Embedded Design

HONORS AND AWARDS

Power and Energy Society Scholar 2021

Michael B. Silevitch Exemplary Engineering Leadership Grant 2021

Huntington 100 Student Life Award 2020

INDUSTRY EXPERIENCE

Electrical Engineering Co-op Jun 2020 – Pres
Honeywell Aerospace, Southborough, MA

- Drove development of 3kW full-bridge DC-DC converter from concept to fabrication, enabling utilization of higher power hydrogen fuel cells in UAV applications
- Developed thermal management for DC-DC Converter utilized in underwater unmanned vehicle applications

Data and Control Systems Co-op Jun 2020 – Jan 2021
SpaceX, McGregor, TX

- Managed the design and implementation of engine avionics checkout stand across three sites, creating harness designs, schematics, and mechanical layout, reducing time spent on engine verification at test stands by 10-20%
- Designed, fabricated, and tested a PCBA that directly enabled launch sequence of an orbital class rocket, reducing technician time required for launch system build by over a dozen technician workdays

- Developed a data acquisition system for a gas densifier, reading from temperature/pressure sensors and controlling valves; acting as the point person for five teams working in sync, as well as guided controls technicians through build and activation

Electrical Engineering Co-op Jun 2020 – Dec 2020
Desktop Metal, Burlington, MA

- Formulated logical function for an FPGA to execute digital signal processing, increasing metal printer speed and constructed external add-on device for quick implementation of FPGA code to existing system
- Designed schematics and PCBs for the main printer board functional test fixture, creating an automated and error-free post-manufacturing process
- Developed electronic devices such as schematics and enclosures for six other projects across four other teams

Biomedical Engineering Technician Jun 2018 – Aug 2018
Rubavu District Hospital, Gisenyi, Rwanda

- Returned over 30 pieces of medical equipment to service through electrical/mechanical repairs
- Sourced and obtained oxygen regulators, decreasing neonatal mortality due to hypoxia
- Designed and implemented a straightforward identification system for fill-level of oxygen cylinders
- Salvaged discarded equipment and household items to create an infant transport incubator, reducing hypothermia rate and vibrational trauma

RESEARCH EXPERIENCE

Northeastern University, Boston, MA 2018
Research Assistant, Applied (Bio)mechanics and Tribology Laboratory

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

PROJECTS

Evaporative Cooling Chamber Controls System Sep 2021 - Pres
D-Lab, MIT

- Debugged both hardware and software for existing controls system, locating hardware that is internationally available
- Conceptualized power system for motors, fans, and controls allowing for varying power inputs based on location

IoT Would Drainage Device Sep 2020 – Jan 2021
Generate Product Development Studio, Northeastern University

- Developed power and controls system including redundant battery power, motor actuated suction mechanism, encoder and photoelectric sensors, battery alarm system, and Bluetooth communication of sensor reading to a mobile device

PROFESSIONAL AFFILIATIONS

IEEE Eta Kappa Nu, Beta Gamma Chapter 2019 – Present
Executive Board, Northeastern University

- *President* - Oversee General Board activities with the aim to create more community throughout the organization through professional development and social events
- *Vice President* – Hosted Annual Student Leadership Conference at Tufts University, exposing students to a wide variety of employers and IEEE resources in conjunction with hands-on engineering activities
- *Secretary* - Acted as primary liaison to HKN members, the ECE department, and HKN Nationals, managed member peer tutoring

Tau Beta Pi, MA-E Chapter 2019 – Pres

Biomedical Engineering Society 2017 – 2019
Executive Board, Northeastern University

- *President* – Acted is liaison between members, executives, and engineering department, coordinated bi-annual co-op and career fair with over two dozen companies

COMMUNITY SERVICE

Dreamfar Running Club 2019 – 2021
Group Leader, Brookline, MA

- Ensured well-being and success of 15 middle and high school students and 5 mentors training to complete a marathon

Climate Action Development 2020
Team Lead, Fortaleza, Brazil

- Designed Climate Action Plan centered around waste management for the city
- Presented proposal to members of the city council

Student Athlete Support Services 2019
Peer Tutor, Northeastern University

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

Husky Ambassador
Tour Guide, Northeastern University 2017 - 2019

- Advocated for university and organization interests

SKILLS

Software: Altium, SPICE, MATLAB, Simulink, LabView, AutoCAD, SolidWorks

Languages: C++, Python, Verilog

Hardware: Soldering, Basic Shop Skills, Oscilloscope, NI Hardware, Arduino

OTHER

Interests/Hobbies: Triathlon, Tennis, Travel, Hiking
Languages: Russian, French