JULIA ESTRIN

ELECTRICAL ENGINEER

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EDUCATION

MASSACHUSETTES INSTITUTE OF TECHNOLOGY (MIT) Cambridge, MA
PhD Student in Power Electronics — Exp. May 2027

- Developing high-frequency magnetics and power converters to reduce size, weight, and cost of power conversion across industries

NORTHEASTERN UNIVERSITY Boston, MA
Bachelor of Science, Electrical and Computer Engineering, *Summa Cum Laude* — May 2022

EDUCATION

ELECTRICAL ENGINEERING CO-OP
Honeywell Aerospace | Southborough, MA — Jun 2021- Dec 2021

- 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 & CONTROL SYSTEMS ENGINEERING CO-OP
SpaceX | McGregor, TX — Jun 2020 – Jan 2021

- 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; acted as the point person for five teams working in sync, as well as guided controls technicians through build and activation

BUILD STUDIO ELECTRICAL ENGINEER
Northeastern University | Boston, MA — Jan 2020 - May 2020
Generate is Northeastern's only student led product development studio for entrepreneurial engineers

- Lead electrical efforts in designing an IoT post-surgical Wound Drainage Bag with a novel constant suction mechanism
- Developed design for a battery-powered system including motor actuated suction mechanism, encoder and photoelectric sensors, battery alarm system, and Bluetooth communication of sensor reading to a mobile device

ELECTRIC ENGINEERING CO-OP
Desktop Metal | Burlington, MA — Jun 2019 - Dec 2019

- Designed schematics and PCBs for the main printer board test fixture, creating an automated and error-free post-manufacturing QA process
- Created Verilog function and initialized hardware for an FPGA to execute digital signal processing, increasing metal printer speed; constructed external add-on device for quick implementation to existing system

AWARDS

- **Recipient, Power and Energy Society Scholar** (2021)
- ***Recipient, Huntington 100 Student Life Award*** *(2020)*

ACTIVITIES

- **President, Graduate Women in Course 6** (20223-2024)
- **Managing Direction, MIT Energy Career Fair (2023 – 2024)**
- **President, IEEE Eta Kappa Nu** (2021 - 2022)
- **Officer, IEEE Northeastern** (2020)
- **Mentor, DreamFar Running Club** (2019 - 2021)
  - Training high school students for a marathon

SKILLS

Software: *Altium, SPICE, MATLAB, Simulink, LabView, SolidWorks*
Languages: *C++, Python, Verilog, G-Code*
Hardware: *Impedance Analyzer, Oscilloscope, Soldering, Basic Shop, STM32, NI Hardware, 3D Printing*
Interests: *Triathlon, Snowboarding, Hiking, Baking*