

# ESTHER IN

(240) 474-3426 | [ei53@cornell.edu](mailto:ei53@cornell.edu) | 20812 Gaelic Ct, Germantown, MD 20874

## **EDUCATION:**

**Cornell University College of Engineering**, Ithaca, NY

*Class of 2022*

Electrical and Computer Engineering (major), Computer Science (minor)

National Merit Scholarship 2018 Semifinalist, Silver President's Volunteer Service Award 2016

## **EXPERIENCES:**

**FIRST Tech Challenge Team 9450 Falcons FIRST**

*June 2017 – July 2018*

*Electrical Lead, Webmaster, Business Team*

- Competed at the FTC World Championships 2018: Detroit.
- Oversaw and managed the electrical sub-team during the shift from a modular system to a one-element electrical board.
- Built and maintained the team website <https://falconsfirstftc.weebly.com/> using prebuilt Weebly toolset and HTML/CSS.
- Drafted and edited business plan for presentation to five sponsors and competition judges.

**Johns Hopkins University**

*June – August 2017*

*Lab Research Assistant, Institute of Cell Engineering*

- Created and maintained cell media, preformed SDS-PAGE gel trials, and utilized laboratory equipment to collect qualitative and quantitative data.

**Poolesville High School**

*December 2016 – January 2017*

*Engineer for Simulated Planet & Weather Balloon Project*

- Drafted and created Computer-Assisted Drawing models of miniature rover prototypes.
- Built miniature rover prototypes, successfully navigated simulated planet terrain using sensors and Arduino boards, and presented data and conclusions.
- Drafted and built the sensor package for a weather balloon to be launched at 150,000 ft.
- Built and utilized testing apparatus for sensor package to simulate low-pressure low-temperature conditions.

**Harper**

*January 2015 – Current*

*Co-Head Administrator*

- Responsible for maintaining site databases, moderating site content and member participation, and training and overseeing moderators.
- Responsible for mediating and resolving interpersonal conflicts among members of an international co-operational writing community.

## **SKILLS, ACTIVITIES, RELATED COURSEWORK:**

### **Skills**

- Java, Python, HTML/CSS, Verilog & Quartus (novice).
- Soldering, Machining (table saw, band saw, etc.), Computer-Aided Design (novice).

### **U.S. and International Patent Applications**

- "Method and apparatus for harvesting electrical energy from air flow in a moving system," PCT/US18/55781, co-inventor, October 2018.
- "Method and apparatus for harvesting electric energy from a moving system," U.S. 62/572,391, co-inventor, October 2017.
- "Protective case for mobile device," U.S. 62/579,146, co-inventor, October 31, 2017.

### **Related Coursework**

- CS 2110: Object-Oriented Programming and Data Structures, ECE 2300: Digital Logic and Computer Organization.

### **Other Collegiate Activities**

- Society of Women Engineers High School Outreach Committee: Planned, organized, and executed an event for 30 high school attendees, coordinating with industry speakers at GammaTech and Corning Incorporated.