Emily Satterfield

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WORK EXPERIENCE

Analog Devices, Wilmington, MA - *Quality Intern; 40 hours/week*

June 2018 - August 2018

Worked in the product analysis lab as part of the Failure Analysis groups at ADI. Prepared and imaged parts through mechanical cross-sectioning and use of scanning electron microscopes and FIB. Designed and 3D printed many parts for organizational use in the lab.

Private Tutor, Andover/Tewksbury, MA -*Math Tutor; 5 hours/week*

August 2017 - present

Tutor two students in algebra and geometry a few times a week in their homes. Also help with standardized test prep.

Analog Devices, Wilmington, MA - *FIRST Robotics Intern; 30 hours/week*

June 2017 - August 2017

Worked with Analog Devices technologies to apply them to the FIRST Robotics Competition. Created documentation with instructions for autonomous programming in Java. Wrote a blog on the company's internal web page to showcase our work throughout time. Developed software for the ADI demo robot to use at showcases for various autonomous functionalities.

Lincoln Elementary School, Lowell, MA — *Afterschool Teacher; 6 hours/week*

December 2016 - April 2017

Introduced science and engineering concepts to third and fourth grade students via self-made hands-on activities. and robotics curriculum that mirrored STEM standards.

Demoulas Inc., Tewksbury, MA — *Cashier; 10-12 hours/week*

October 2014 - present

EDUCATION

Lowell High School, Latin Lyceum, Lowell, MA

August 2014 - 2018

4.7 GPA; top student in the class of 2018.

EXTRACURRICULAR ACTIVITIES

FIRST Robotics Competition Team 5962, UMass Lowell, Lowell, MA — *2015-present*

Team Captain, 2017- present

- Lead and organize all the subteams.
- Plan activities and execute various outreach projects.
- Coordinated STEM inclusion workshop for girls in the Merrimack Valley at UMass Lowell, including design of all projects, organization of presenter and attendees, and logistical needs of event.

Electrical Lead, 2015- 2017

- Designed and built the electrical systems of team's robots.
- Led the electrical team in the development of the electronic subsystem.
- Helped to integrate electrical systems with mechanical and software subsystems and keep designs within rule restriction.

MIT Junction, MIT, Cambridge, MA - *Summer 2016*

Selected to participate in a summer independent study program at MIT. Designed, built, and programmed a

calculator from scratch using an Arduino. Built a three-bit adder to demonstrate the principles of basic operations in hardware. Presented my work in short lecture and at science expo. Developed an academic paper on my work to be published in the *Junction Journal.*

Math Team - *2013-present*

Division High Scorer 2014 (Middle School); Top scorer at Lowell High School since 2015. Work with my teammates practicing and reviewing old questions in preparation for team competition.

National Honor Society, Lowell High School, Lowell, MA - *2016- present*

Help to recruit volunteers to work in Lowell Middle Schools' STEM clubs and volunteer as a science fair judge. Volunteer as a tutor for freshmen once a week for math and science.

Lemelson-MIT Inventeam, Lowell High School, Lowell, MA - *2015 - 2017*

Worked with eight other students to research and draft solutions to problems in our community. Focused efforts on uncovering solutions to assist people affected by Parkinsonian tremors. Developed prototype brace for this purpose and submitted it for grant consideration.

Awesome Math Camp, Cornell University, Ithaca, NY - ***Summer** 2015*

Participated in an intensive summer program focusing on proof writing and competition math in algebra and geometry. Ten hours a day of lecture and homework.

VOLUNTEER WORK

- FIRST Lego League Jr. Coach (December 2016 -present); 5 hours/week after school; mentor of twelve third and fourth graders
- Tutor (2016 - present); 1 hour/week as part of National Honor Society service
- Merrimack Valley Robotics Inc. Member - Organized and ran two FLL Jr. Expos; Organized and ran four Women in STEM events at UMass Lowell; training to be the treasurer for the organization

AWARDS

Harvard Book Award (2017) awarded to the top junior in the class.
William S. Samas Sophomore Prize (2016) awarded to the top sophomore of Latin Lyceum class..
Athletic-Academic Achievement Award (2016) Varsity Swimming.
Golden Goggles Award (2016) Awarded to most valued teammate on the varsity swim team.
National Merit Scholarship Commended Student (2017).

SKILLS

- SolidWorks, Onshape, and Autodesk Inventor
- Microsoft Excel, Powerpoint, and Word
- Arduino Language
- LaTeX
- Java Language

REFERENCES

Anthony Iarrapino
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