Elizabeth Ziemer

✉ ziemereg@rose-hulman.edu 🌐 ascii.garden 🏠 Chicago, IL

Education

B.S. in Electrical Engineering   **Aug 2021 - Present**

Rose-Hulman Institute of Technology   *Terre Haute, IN*

~ Minor in Robotics. *Relevant Coursework:* Intro to Signal Processing, Intro to Digital Systems, DC/AC Circuits, Power Systems, Probability w/ Statistics, CT Signals and Systems

Experience

Engineering Intern   **June 2023 - August 2023**

SpaceX   *Hawthorne, California*

~ Led a high-impact investigation on phased array RF characteristics, implicating antenna theory, materials, and antenna calibration software. The resolution led to a ~4% FPY increase.
~ Developed a Python library for comprehension of RF calibration data and failure modes. Involved big data processing and database work.
~ Contributed to root cause failure mode work on current and next-gen Starlink products.

Software Engineering Intern   **June 2022 - August 2022**

Kratos Defense   *Colorado Springs, Colorado*

~ Wrote robust drivers for the characterization and use of RF hardware.
~ Contributed to the internal test system Python library, widely utilizing OOP principles.
~ Spearheaded research and implementation RedHat OpenStack deployment.

Leadership

President   **Dec 2021 - Present**

Rose Tech Radio Club   *Terre Haute, IN*

~ Dedicated to student exploration of electronics, radio, community service, analog/digital RF and signal processing technology.
~ Managing club affairs in student government, fostering collaboration with other collegiate radio clubs, and creating campus events for community engagement in communications technology.

Sophomore Advisor   **Aug 2022 - May 2023**

Percopo Hall, Residence Life   *Terre Haute, IN*

~ Full-time resource for new students. Responsible for planning on-campus activities and communication.

Projects and Involvement

Independent robotics projects

~ *Won Sony Corporation's robotics programming contest* for their ERS-1000 platform
~ *Volunteer for FIRST* Robotics Challenge and Tech Challenge events serving middle and high school students

Independent RF projects

~ Designed a balloon with GPS data and WSPR (FSK) transmissions that circled the globe. This balloon was confirmed to be erroneously shot down by the United States Air Force
~ Collaborated with NASA Student Launch team to create a payload direction finding system

Skills

Programming languages: Python, Java, C, MatLab   *Software:* Linux, Azure, OpenStack
Tools: Git, Maple, GNU Radio, LaTeX   *Certifications:* FCC General Class radio license, Rose-Bud Scholar