

Ella Sarder

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Languages: Python (Pandas, Matplotlib, Numpy),
C++, C, Java, MATLAB, JavaScript, XML, Angular,
HTML, CSS
Github: www.github.com/esarder
Website: esarder.github.io

Education

University of Colorado Boulder

May 2022

Bachelor of Science in Computer Science

Minor in Creative Technology and Design

GPA - Major: 4.00/ Cum: 3.97

Software Development Experience

Robotics Research Assistant | *HIRO Group – CU Boulder, Boulder, CO* | August 2019 - Present

- Created a human-robot communication system that projects images on the ground and walls to broadcast a robot's planned trajectory and goals in crowded or confusing spaces.
- Designed to increase people's sense of trust and security with robots in their interpersonal zones.
- Projector system utilized **ROS** architecture with **Python** scripts and **XML** launch files.
- Designed 3D printed structure to attach projector to robot using **SolidWorks**.
- Reduced time required to calibrate the lab's robots by 70% by developing an automatic calibration system in **Python**.

Software Development Intern | *BITSystems – CACI International, Aurora, CO* | May 2019- August 2019

- Developed a front-end application designed to provide clients administrative control of BITSystems software.
- Provided functionality and server communication with **JavaScript** and **AngularJS**.
- Utilized the codebase of an existing application to match CACI standards and design.
- Taught myself **HTML**, **CSS**, **JavaScript**, and **Angular JS** in the first two weeks and continued learning during the development process.

Teaching Experience

Course Assistant for Discrete Structures and Data Science | Boulder, CO | May 2020 - Present

- Work one-on-one with students to help them understand challenging concepts and provide additional resources.
- Hosted office hours, monitored student forums, and assisted instructors with homework solutions and lectures.

Tutor | Boulder, CO | January 2019 - Present

- Tutored students of all ages in mathematics (arithmetic to calculus), physics, chemistry, biology, reading, and writing.
- Helped students with learning disabilities or low grades rebuild their confidence in their abilities and find learning strategies that work for them.

- Tailored teaching method to each students' learning style.
- Helped students cultivate a system of organization for their academics and extracurriculars.

Projects

Project Ariadne | Data Structures Project | April-May 2019

- Created a **C++** application that allows users to set emergency timers for activities like blind dates or outdoor adventures.
- Developed the application to send the user's emergency contacts an email with information about the user's activity and location if the user does not enter their pin within specified time.

Skills & Abilities

- Computer Software: Windows, **Linux OS** , Git, Github and Gitlab.

Leadership and Awards

Google exploreCSR Member | January 2020 - Present

- Selected as a member of the 2020 Cohort of the Google exploreCSR program through CURC du Colorado.

Club Head and Public Relations Manager | CU Boulder Swing Dance Club | May 2019 – May 2020

- Ran executive board meetings and delegated tasks to spread work evenly throughout the team.
- Managed budgets and payments for the organization.
- Acted as a liaison for the club in interactions with the university and outside organizations.

Project Manager/Research Assistant | Eckerd College, St. Petersburg, FL | August 2017-August 2018

- Organized and directed personnel to increase lab efficiency and represented the lab at conferences.
- Copy edited papers, proposals, and posters for publication.