

Emma Bethel

she/her

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(415) 341-2747

Education

Tufts University School of Engineering, Medford, MA

Bachelor of Science in Computer Science, 2024

GPA 3.97, Tau Beta Pi Honors Society 2022-Present

Lowell High School, San Francisco, CA

Class of 2020, Shield and Scroll Honors Society 2019-2020

Work Experience

Tufts University Computer Science Department, Medford, MA

Algorithms TA, Spring 2023 - Present // Discrete Math TA, Spring 2022 - Fall 2022

- Hold office hours to answer student questions and go over new content.
- Grade and give feedback on proofs, algorithm designs, and other math work.

Ciena Corporation, Hanover, MD (Remote)

Cloud Engineering Intern, Summer 2021 - Summer 2022

- Design and program a REST API and attached database using the Django REST Framework, with features based on discussions with future users.
- Set up infrastructure for running a web server remotely in Docker containers using AWS ECS and Fargate.
- Thoroughly document and present new functionality to coworkers, superiors, and future users.

Tufts Center for Engineering Education and Outreach, Medford, MA

Research Intern, Winter 2020

- Expanded, documented, and created examples for software library for JavaScript control of LEGO SPIKE Prime robots.

Activities

Tufts Assistive Agent Behavior and Learning Lab, Medford, MA

Undergraduate Research Assistant, Fall 2022 - Present

- Provide data visualizations and other assistance to Ph.D. researchers.
- Regularly discuss recent advancements and possible future work in the Human-Robot Interaction field.

Tufts Robotics Club, Medford, MA

Secretary, Fall 2022 - Present // General Member, Fall 2020 - Spring 2022

- Plan and lead workshops in areas such as computer vision, motor control, and ROS.
- Organize internal robotics competitions, including a self-designed computer vision competition.
- Design and program robots for local robotics competitions, such as the Harvard Pacbot Competition.

Skills

- Programming in Python, C, C++, Java, SQL, JavaScript.
- Designing and implementing complex robotics systems using ROS.
- Training, testing, and analyzing performance of various machine learning models using Sklearn.
- Implementing bayesian networks, kalman filters, and particle filters for perception and decision making.
- Developing software collaboratively through the Agile framework.
- Visualizing data using Matlab and PyPlotLib.
- Image processing using OpenCV.