Eliot Hall

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Education

San Jose State University *August 2023 - Present*

- Pursuing a BS in Computer Science; Sophomore graduating Spring 2026; 4.0 GPA
- Took "Data Structures and Algorithms" in C++ and Java

MIT Beaver Works Program *June 2022 - July 2022*

- Earned the "Dr. Bob Berman Award" for creating personalized explanations and examples to assist other students
- Developed an AI to play a zombie outbreak game using OpenAI gym and Stable Baselines's PPO algorithm

Work Experience

Research Assistant - San Jose State University *October 2023 - Present*

- Collaborate with Dr. Vishnu Pendyala to prepare a paper on Natural Language Processing for NeurIPS
- Utilize interpretability techniques (ie SHAP) to investigate novel approaches to LLM misinformation containment
- Identify, analyze, and visualize factors that contribute to LLMs' ability to generate misinformation

Personal Projects / Volunteering

Stanford Ribonanza RNA Folding Competition *October 2023 - December 2023*

- Outperformed 700+ teams and won a silver medal by modeling RNA 3D structures with less than 0.2 MAE
- Reduced model MAE by over 50% by writing a custom transformer in PyTorch and parallelizing our training loop
- Designed a 75% faster data preprocessing pipeline to extract meaningful features, further reducing model MAE

IBM Z Datathon *October 2023*

- Outperformed 100+ teams and won a silver medal for my approach to hate-speech detection
- Remotely fine-tuned and deployed a BERT model using TensorFlow on a Linux-based IBM Z instance
- Countered dataset label imbalance by collecting, cleaning, and modifying a hate-speech dataset

IHSBoost *January 2023 - April 2023*

- Enabled faster prototyping for my robotics team by creating a CMake-based C++ library with Python bindings
- Facilitated modular, object-oriented software by implementing custom threading, sensor, and movement classes
- Deployed a CI/CD pipeline to auto-deploy documentation to GitHub Pages and build the Debian package

Open Source Contributor - KISS Institute for Practical Robotics *March 2022 - August 2023*

- Fixed failing CI/CD builds by refactoring and debugging the embedded C robotics firmware
- Created a more user-friendly UI (built in Angular JS) by incorporating student feedback into UI development
- Released Bot OS 27 with KIPR employees, using QEMU and Docker to create a stable, flashable OS image.

Python Project Lead, Enoch Project Lead - Code 4 Tomorrow *March 2020 - May 31, 2023*

- Saved volunteers 8+ hours a week by creating Enoch, a web service to automate student registration
- Recruited and managed a team of five volunteers using Agile methodologies to maintain and optimize Enoch