Andrew Sasamori

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Education

Boston University Boston, MA

Bachelor's of Science in Computer Engineering, Concentration in Machine Learning May 2022 – May 2025

Relevant Coursework:

Deep Learning, Optimization for Machine Learning, Machine Learning, Operating Systems, Computer Organization, Computer Communication Networks, Software Engineering, Data Structures, Algorithms, Statistics/Data Science

Experience

Undergraduate Research Assistant Jan. 2024 - Present

Tianyu Wang Research Lab at Boston University *Boston, MA*

- Presented literature reviews for invention of autonomous Deep-Reinforcement Learning-based Electron Microscope
- Produced photonic neural networks for efficient machine-learning computation by parsing through the diffractio library in Python to allow usage with Tensor objects

Device Engineering Intern June 2024 - Aug. 2024

alarm.com *Boston, MA*

- Updated and distributed full-stack Flask-based internal website for monitoring embedded firmware IoT devices
- Deployed Docker images for Windows, macOS, Linux based applications using Raspberry Pi Debian packages
- Maintained structure, optimization, and stable code across Linux CLI compatibility via testing protocols

Algorithms Course Teaching Assistant Jan. 2024 - May 2024

Department of Electrical/Computer Engineering at Boston University *Boston, MA*

- Lead office hours to help 50+ students with various Computer Science Algorithms topics ranging from Discrete Math, Asymptotic Notation, and Dynamic Programming
- Created auto-grading tool by highlighting distinct edge cases for students to consider when submitting code
- Collaborated with lead Professor to create original deviations of algorithmic conceptual questions and programming problems in C++

Software Engineering Intern May 2023 – Aug. 2023

Lockheed Martin *Huntsville, Alabama*

- Constructed vehicular software compatibility used by 1,000 users and displayed diagrams and source code to compare and modify attributes based on required parameters
- Improved data model creation by 75% by parsing component structure into element specific JSON files via creation of REST API and Plugins
- Introduced accessibility for classified, informative files to continuously update and display corresponding diagrams remotely and subconsciously without opening previously necessary applications

Projects

Deep Reinforcement Learning Poker Bot March 2024 - Present

Keras, PyTorch, Stable Baselines, OpenAI Gym

- Refined a Deep Reinforcement Learning based Poker AI to maximize profits in No-Limit Texas-Hold-Em poker
- Applied Stable Baselines, Keras, and PyTorch for neural network based approaches such as DDQN and Monte Carlo Tree Search against popular DQN procedure
- Tuned hyperparameters and parameters by training under A100 GPUs to allow best configuration for 6-player games and to test against other pre-existing models on GitHub

Autonomous Rover Navigation Sub-Team Sep. 2022 – Present

C++, Arduino, Raspberry Pi, ROS

- Uploaded various implementations of original Path Planning and Pattern Recognition algorithms to Mars Rover's NVIDIA Jetson Nano for Autonomous driving capabilities
- Assessed dummy test scripts of A* (2D Path Planning Algorithms) to anticipate margins of error in alternative algorithms

Technical Skills

Languages: Python, C++, Java, JavaScript, TypeScript, HTML, MatLab, Arduino, Verilog
Frameworks: Flutter, React, Node.js
Libraries: PyTorch, Keras, TensorFlow, Numpy, JQuery, Stable Baselines, Scikit-Learn, Pandas
Developer Tools: Linux/Unix, Raspberry Pi, Git, GCP, AWS, Docker, Microsoft Office Suite