

Sam Rowe

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EDUCATION

Master of Science in Computer Science

Worcester Polytechnic Institute

- 3.75 GPA

Class of 2023

Worcester, MA

Bachelor of Science in Computer Science

Worcester Polytechnic Institute

- 3.79 GPA

Class of 2023

Worcester, MA

Relevant Coursework: Advanced Computer Networks, Artificial Intelligence, Big Data management, Database Management Systems, Machine Learning, Natural Language Processing, Object-Oriented Analysis and Design, Operating Systems, Software Engineering

TECHNICAL SKILLS

Languages: Python, Java (incl. JavaFX), C/C++, SQL/SQLite, Apache Hadoop, Kotlin, MATLAB, \LaTeX

Software: Docker, Git, GitHub, GitKraken, JetBrains IDEs, VMware/VirtualBox, MS Office 365

Operating Systems: Windows, Linux (Ubuntu, Debian/Raspbian)

RELEVANT PROJECTS

Augmented Reality Driving Experience | Python, \LaTeX

Aug 2022 – Mar 2023

A framework that allows a user to remotely control an RC car via a VR headset and the associated controllers.

- Developed a FastAPI-based webserver capable of remotely handling commands sent to a Raspberry Pi while streaming a video feed from an attached camera.
- Installed and configured the OS and necessary dependencies for the RC car's drivers on the Raspberry Pi.

ASL Motion Translator | Python

May 2022 – Aug 2022

An application that uses a computer's web camera to parse and translate the ASL alphabet to English in real-time.

- Adapted and expanded a hand symbol recognition project to parse hand and finger orientation through a user's webcam via OpenCV and MediaPipe. Capable of handling both symbols and gestures.
- Trained multiple sequential neural networks using Tensorflow and Keras to classify the ASL alphabet.

Centrally-Managed Perimeter Access Control | Python

Mar 2022 – May 2022

A software-defined network that allows the administrator to control packets arbitrarily without being restricted by the firmware in network switches or routers.

- Researched and planned an OpenFlow powered software-defined network firewall for honeypotting bad-actors en masse, based on paper by Prof. Craig Shue. Agents commanded by the controller were running on Linux virtual machines.

Stock Price Prediction | MATLAB, \LaTeX

Aug 2021 – Mar 2022

A series of models created to make short-term value predictions of 15 companies' stocks within the materials sector.

- Implemented multiple prediction models using techniques such as Fourier analysis and Savitzky-Golay filtering within MATLAB, utilizing real-world stock data sourced from (finance.yahoo.com) to make short-term price predictions during a simulated trading period.

Multi-Purpose Application Designed for Brigham & Women's Hospital | Java

Mar 2021 – May 2021

A fully-featured pathfinding application with integrated service request modules created to inform Brigham & Women's Hospital about potential future features, user interfaces, and design approaches.

- Applied Agile development methodologies and software design patterns in Java to design and implement an indoor path-finding application, map builder, COVID-screening survey, and integrated service request modules within a 10-person team as a part of a class competition. Placed 1st in the competition alongside another team.
- Gathered software requirements via survey, interview, brainstorming, user story creation, scenarios, and storyboards. Planned, developed, and debugged the user interface, service request modules, and database integration. Maintained version control and issue tracking via Git and Github.
- Jointly managed project tasks, coordinating and running task planning meetings, and motivating all team members.