JAMES RICHIE SULAEMAN

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EDUCATION

University of Washington September 2020 – June 2024 (est.)
CSE GPA: 3.95/4.00 *Seattle, Washington*

- B.S. Computer Science, B.S. Mathematics

WORK EXPERIENCE

Data Structures and Parallelism Teaching Assistant June 2023 – August 2023
University of Washington *Seattle, Washington*

- Developed and delivered engaging educational materials, including slides, videos, and worksheets, to enhance student comprehension and interest.
- Guided and supported a team of teaching assistants in effectively delivering course content, ensuring consistency in teaching methodologies.
- Led regular meetings with teaching assistants to discuss and improve course materials, share best practices, and address challenges faced, resulting in continual improvement and refinement of course for future iterations.

Artificial Intelligence Research Intern June 2021 – September 2021
Samsung Electronics *Jakarta, Indonesia*

- Interned on the code completion team responsible for developing a code completion assistant based on IntelliSense.
- Using **PyTorch** and **Ray Tune**, automated the hyperparameter search and optimization process via Random Search, thereby eliminating the need for Manual Search by developers.
- Reduced developer time spent searching for hyperparameters by ∼80% and resulted in a ∼10% increase in top-5 completion accuracy across various sample Python libraries.

PROGRAMMING PROJECTS

Juniper June 2022 – Present

- Leading a team of four students to create a cross-platform social networking application that matches students with potential study partners.
- Prototyped the user interface in **Figma** and built the front-end using **React** for web clients and **React Native** for mobile clients.
- Implemented a RESTful service in **Java** hosted on AWS EC2, handling HTTP requests using the Spring framework and communicating to an AWS RDS MySQL server using the Java Database Connectivity API.

AI Pacman Agent March 2022 – June 2022

- Developed artificially intelligent agents using **Python** to play Pacman against another AI agent or player.
- Implemented the agent from scratch using the Alpha-Beta pruning and the Expectimax search algorithms, as well as the Q-Learning reinforcement learning algorithm.
- Top performing agent (Q-Learning) recorded an over 90% win rate against the classic Pacman ghost agents.

Simulated Flight Booking System April 2022 – May 2022

- Created a simulated flight booking system in **Java** that allows users to concurrently search and book flights securely and responsively.
- Data set was obtained from the Bureau of Transportation Statistics and consisted of 1,148,675 rows reflecting real-life flight routes.
- Managed concurrency challenges at both the application and database layer, ensuring ACID consistency.