

JAMES RICHIE SULAEMAN

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EDUCATION

University of Washington

CSE GPA: 3.96/4.00

September 2020 – June 2024 (est.)

Seattle, WA

- B.S. Computer Science, B.S. Mathematics
- Relevant Courses: Algorithms, Artificial Intelligence, Database, Data Structures and Parallelism, Hardware/Software Interface, Linear/Nonlinear Optimization

WORK EXPERIENCE

Artificial Intelligence Research Intern

Samsung Electronics

June 2021 – September 2021

Jakarta, ID

- Interned on the code completion team responsible for developing a code completion assistant based on IntelliSense
- Using **Python** 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

US Census Dashboard

October 2021 – November 2021

- Created a dashboard using **Java** that enables users to query the U.S population residing within a latitude-longitude grid
- Data set was obtained from the U.S. Census Bureau and consisted of 2,100,333 distinct census block groups
- Developed preprocessing techniques and implemented parallel algorithms to speed up query execution