Ahmad Masud

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Education

Simon Fraser University Expected Graduation: Dec 2027
Bachelor of Science in Computer Science *Burnaby, BC*

- Dean's Honor Roll (top 10% in faculty)
- Relevant Coursework: Data Structures, Algorithms, Software Engineering, Computer/Operating/Database Systems

Technical Skills

Languages: Python, Ruby, Groovy, JavaScript, Java/C#, C/C++, SQL, HTML/CSS, GraphQL
Frameworks: React.js, Node.js, Express.js, JUnit, Firebase, Spring Boot, Maven, MSBuild, Mongoose,
DevOps: Git, Jenkins, Docker, JFrog Artifactory, CI/CD, Agile Developement

Work Experience

Hitachi Sep 2024 – Present
Software Engineer Intern *Burnaby, BC*

- Contributed to SkyTrain monitoring tools using C++ for real-time supervision of **400+ Rolling stock units**
- Integrated concurrent data processing in the CBTC train-scheduling module using pthreads, reducing latency by **25ms** per cycle and enabling immediate re-optimization of train headways under various conditions
- Streamlined build processes with MSBuild, Gmake, and Jenkins, reducing build times for a team of **60+ developers**
- Automated repetitive tests using Groovy scripting in Jenkins, saving **16 hours** of manual testing per sprint
- Converted Ruby testing framework to run from a MSI package, reducing testing time by **50%** per release

Technical Projects

CompCode | *JavaScript, React, Node.js, Firebase, Stripe* | Site Aug 2024

- Developed a platform for students to practice coding concepts, featuring curated LeetCode problem explanations
- Leveraged Firebase for authentication, and Cloud Functions to support up to **2M transactions** monthly via Stripe
- Implemented lazy loading and skeleton fallbacks to improve performance, reducing initial load times by **800 ms**

Linux Memory Allocator | *Linux, C++, Posix, Pthread* | GitHub Jul 2024

- Designed a multithreaded memory allocator with advanced allocation strategies, and memory management techniques
- Utilized Linux syscalls and Posix Threads to achieve a **10% increase** in CPU and memory utilization

Quant Market Predictor | *Python, numpy, pandas, matplotlib, scikit-learn* | GitHub Jan 2024

- Created a model using sklearn's Linear Regression library, analyzing historical stock data to predict future prices
- Added the ability to get the volatility of stock by calculating the standard deviation of its market price fluctuations
- Leveraged Python's unit testing library and GitHub workflows to achieve **80% code coverage**

Sorting Visualizer | *Java, JUnit, Swing, Maven* | GitHub Jan 2023

- Designed a desktop application with the Java Swing library to visualize the routines of **5 sorting algorithms**
- Programmed **7 unit tests** for each sorting algorithm with JUnit to ensure proper functionality

Community Involvement

SFU Open Source Development Club Jan 2024 – Aug 2024
Software Developer *Burnaby, BC*

- Integrated a web API into React using Axios, displaying detailed stats for over **500 NBA players**
- Worked as a team, adopting Agile methodologies to ensure timely delivery of **3 major updates**
- Implemented automated testing and **CI/CD pipelines** using GitHub workflows to ensure production-ready code

SFU Hiking Club Jan 2024 – Apr 2024
Software Developement Consultant *Burnaby, BC*

- Developed a full-stack website in Spring Boot using the **MVC architecture** to improve maintainability
- Implemented REST Controllers to handle CRUD operations, simplifying database management in PostgreSQL