

SAAD MAZHAR

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EDUCATION

University of Ottawa

Expected April 2026

Honours Bachelor of Computer Science, Minor in Mathematics

EXPERIENCE

Fullstack Software Engineer Intern

January 2025 – May 2025

Tesla

Palo Alto, California

- Worked on a suite of hosted applications to help generate and validate low level electrical schematics for **10,000+** engineers worldwide using **React, TypeScript, Go, Kubernetes, and Docker**
- Wrote efficient **GraphQL** queries to return data from a **MySQL** database with millions of records.
- Leveraged **goroutines** and **channels** to implement **concurrent data processing pipelines**, significantly improving the throughput and responsiveness of backend services.

Embedded Software Engineer Intern

May 2024 – September 2024

Nokia

Ottawa, Ontario

- Developed **Python** automation scripts to eliminate redundant In-Service Software Upgrade (ISSU) functions and structures in a large embedded **C** codebase, reducing manual effort by approximately **92%**.
- Streamlined codebase maintenance by automating the identification and removal of obsolete ISSU components, processing over **1,000,000** lines of code. execution time by **3%** and enabling more frequent integration testing cycles and **CI/CD** Pipelines.

Software Engineer Intern

September 2023 – December 2023

Nokia

Ottawa, Ontario

- Generated a suite of **Bash** scripts that automatically configured accurate **IP/TCP** protocols for newly brought up networking testbeds.
- Worked with a network of 800+ **Linux** testbeds to ensure runtime and efficient operation for networking and testing.

Software Engineer Intern

May 2023 – September 2023

Diffraction Limited

Ottawa, Ontario

- Designed and implemented a **C** enumeration system to efficiently translate hex codes into corresponding error messages, reducing error interpretation time.
- Optimized **SQL** database schema for parsed log data, resulting in a **50%** improvement in query response times.

PROJECTS

AI/ML Research Paper: HABO Framework for Hyperparameter Optimization

- Conducted in-depth analysis of stochastic and adversarial bandit algorithms, demonstrating their efficacy in applications of hyperparameter optimization for machine learning models.
- Supervised by Dr. Tom Cesari at the University of Ottawa EECS department.

SaadGPT

JavaScript, Python

- Made a unique take on the ChatGPT website layout and design to host my personal website.
- Features a custom chatbot that answers questions from my resume and experience.

Custom Interpreter

Go

- Built a lightweight interpreter from scratch for a custom programming language, supporting basic arithmetic operations, control flow, and data types.
- Developed comprehensive unit and integration tests to ensure correctness and stability.

TECHNICAL SKILLS

Languages: Go, C, C++, Python, TypeScript/JavaScript, HTML/CSS, C, SQL, Bash

Technologies: GraphQL, React, Git, Jira, Vim, Kubernetes, Docker, Linux/Unix, Vue.js, RESTful APIs, MySQL, Postgres, AWS, NGINX, Redis