

Farzan Bhuiyan

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TECHNICAL SKILLS

Languages: Python, C++, C, TypeScript, Go, Rust, Java **Frameworks:** React, Vue.js, Node.js, Django, Flask, Spring, TensorFlow
Data: SQL, Kafka, Cassandra, MongoDB, Redis, Airflow **Infra:** Git, Docker, Kubernetes, Linux, GCP, AWS, Azure, Jenkins

EXPERIENCE

Adentro May 2024 – Aug 2024

Software Engineer Intern - Application Security/DevOps

San Francisco, CA

- Incoming Summer 2024 intern powering security & infrastructure with **Golang, AWS, PostgreSQL, Snowflake and Kafka**

Rodan Energy

Sept 2023 - Dec 2023

Software Engineer Intern - Energy Market Dashboard

Toronto, ON

- Integrated new frontend tools to remove **154 npm vulnerabilities**, cut build times by **62%** and launch dev server **135x faster**
- Eliminated interval data refreshes by integrating **Redis** and **Django Channels** to provide live data updates with websockets
- Refactored an internal **Python** dependency for API servers and ORM code in **Django** to cut page response times by **47%**
- Updated **200+ Vue.js components** and migrated **25K+ lines of JavaScript** to **TypeScript** for better developer experience
- Developed energy forecasts with complex ML algorithms (XGBoost, Regression Forest, RNNs) achieving a MAPE of **<2%**

NCR Corporation

Jan 2023 – Apr 2023

Software Engineer Intern - Channel Services Platform

Waterloo, ON

- Built backend APIs for money movement on Teller software servicing **200M+** bank users on **Spring Boot** microservices
- Played a pivotal role in building a robust work management microservice with **Java, Kafka, Kubernetes** and **Cassandra**
- Leveraged a **Java/Maven** internal tool to build and debug RESTful API endpoints with **swagger/OpenAPI** specifications
- Designed comprehensive, automated E2E and **JUnit** tests using **Java Spring Framework** with over **85%** code coverage

Questrade

May 2022 – Aug 2022

Full Stack Engineer Intern - Core Systems/Data Engineering

Toronto, ON

- Built ETL pipeline with **Dataflow** and **Apache Beam** to load **200K+ rows** of market data daily on a **Cloud MySQL** server
- Orchestrated data workflows with **Apache Airflow** and used **Datadog** to measure a **20% reduction in processing times**
- Designed a multi-threaded client-server protocol in **Python** for trading with **<1ms latency** and integrated with **BigQuery**
- Wrote an **MS SQL** stored procedure for client removal requests, used internally by **50+ DBAs and Software Engineers**

WATonomous

Sept 2022 – Dec 2022

Software Developer - Autonomous Vehicle Radar Software

Waterloo, ON

- Worked on radar point cloud processing for autonomous vehicles writing code for radar sensors in **C++, ROS2** and **OpenCV**
- Improved human-vehicle classification accuracy by **8%** by implementing a new feature-based SVM classifier in **C++**

MyPalate Inc.

Aug 2020 – Dec 2020

Software Developer Intern

Toronto, ON

- Beta launched a recipe sharing web application to **120+** global users built using **React, Node.js/Express** and **PostgreSQL**
- Built a Dockerized recipe recommender API with **Flask** integrated with a **Node.js** backend deployed on **AWS EC2** instances

PROJECTS

Fluxus: LLM Powered Data Workspace for No-code Querying | *OpenAI, Flask, Vue.js, TypeScript, Firebase, InterSystems SQL*

- Built a web app that lets users query complex electronic healthcare record schemas without having to write any code
- Worked on data loading, prompt engineering and finetuning OpenAI for **5000+ customized text to SQL responses**
- Won **1st prize at HackMIT** in healthcare, awarded **\$2000USD** from InterSystems and invited to YC pitch challenge

WLP4 Compiler | *C++, MIPS Assembly*

- Wrote a compiler in C++ for a subset of C called WLP4 implementing the assembler, lexer, parser and code generator
- Placed **10th out of 291 students** in the course compiler optimization contest by using various optimization techniques

EDUCATION

University of Waterloo

Waterloo, ON

Bachelor of Computer Science (Honours), Minor in Combinatorics and Optimization

Sept 2021 – Apr 2026

Achievements: 3x Term Distinction, MIT Hackathon 1st Track Prize - **\$2000USD**, DocuSign Good Code 2nd Place - **\$5000USD**

Relevant Coursework: OOP, Algorithms, Data Structures, Databases, Operating Systems, Compilers, Linear Algebra, Optimization