FARZAN BHUIYAN

437-264-7996 | fa2bhuiy@uwaterloo.ca | linkedin.com/in/farzanbhuiyan | github.com/farzanb49 | farzanb49.github.io

TECHNICAL SKILLS

Languages: Python, C++, C, Java, JavaScript, SQL, Bash **Frameworks**: React, Vue.js, node.js, Django, Flask, Spring, TensorFlow
Data: MySQL, Cassandra, MongoDB, Redis, Kafka, Airflow   **Infra**: Git, Docker, Kubernetes, Linux, OAuth, Jenkins, AWS, GCP

EXPERIENCE

Rodan Energy
Sept 2023 - Dec 2023

Software Engineer Intern - Energy Markets — *Mississauga, ON*

- Integrated new frontend tools to remove **154 npm vulnerabilities**, cut build times by **62%** and launch dev server **135x faster**
- Eliminated **60s of data latency** 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 - Teller Systems Backend — *Waterloo, ON*

- Built backend APIs for money movement on Teller software servicing **200M+** bank users on **Java Spring** microservices
- Played a pivotal role in building a robust work management microservice with effective data partitioning in **Cassandra**
- Scaled the microservice with **Kubernetes** HPA and **Kafka** to handle a **162%** increase in traffic; verified by load testing
- Leveraged a **Java/Maven** internal tool to build and debug REST API endpoints with **swagger/OpenAPI** specifications
- Designed comprehensive, automated E2E and **JUnit** tests using **Java Spring Framework** with over **85%** code coverage

Questrade Financial
May 2022 – Aug 2022

Full Stack Engineer Intern - Core Systems/Data Platform — *Toronto, ON*

- Built ETL pipeline with **Dataflow** and **Apache Beam** to load **200K+ rows** of market data daily into a **Cloud SQL** server
- Orchestrated data workflows with **Apache Airflow** and used **Datadog** to measure a **20% reduction in processing times**
- Designed an algorithmic trading client-server protocol in **Python** with <**1ms latency** and integrated with **BigQuery** store
- Wrote **MS SQL** stored procedure for client removal requests, used by entire network of **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++**
- Achieved a **9% increase in object detection accuracy** by adjusting radar points based on vehicle velocity estimation

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 recipe recommender API with **Flask**, **NLTK** and **scikit-learn**, scraping **180K+ recipes** to increase user retention
- Integrated the API with a **node.js** backend, deployed to **AWS EC2** instances to horizontally scale the app for **200+** users

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

EDUCATION

University of Waterloo
Waterloo, ON

Bachelor of Computer Science, Honours — *Sept 2021 – Apr 2025*

3x Term Distinction, Minor in Combinatorics & Optimization
Achievements: MIT Hackathon 1st Track Prize - **$2000USD**, DocuSign Good Code 2nd Place - **$5000USD**
Placed **1st/167** students in Linux/Bash Lab and **10th/291** students for writing the most optimized compiler in compilers course