

# Mehrshad Farahbakhsh

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## Education

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### York University

Sep 2021 – Aug 2026

Honours Bachelor of Science in Computer Science

- Overall GPA: **3.7/4.0**
- **Relevant Coursework:** Data Structures, Algorithms, Operating Systems, Database Systems, Software Design, Artificial Intelligence, Computer Security, Applied Machine Learning, Information Networks

## Experience

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### Software Engineer (Co-op)

Jan 2026 – Apr 2026

Argo (TSXV:ARGH)

- Architected a **Go** AI-agent backend that replaced a **\$30K/year** analytics SaaS, orchestrating containerized **Claude Agent SDK** workers via the **Docker** Engine API with concurrency control and **Datadog** telemetry
- Built the agent's chat client in **React + TypeScript** with **WebSocket** live updates over **Protocol Buffers**, adopted by **10+** engineers for natural-language data analysis
- Independently shipped a **Next.js + Mapbox GL** trip-analytics dashboard surfacing patterns across **1,000+** daily rides, with time-window filtering and multi-select pin tooling
- Engineered an end-to-end Slack incident workflow with a **Bolt.js** bot for paging plus an **Express + Playwright** automation server on **AWS EC2**

### Full-Stack Developer (Co-op)

May 2024 – Aug 2025

KPM Power

- Shipped **10+** full-stack platform features in **TypeScript** with **80%+** **Vitest** unit-test coverage
- Built a **MERN**-stack internal API-testing platform with server selection and endpoint browsing, dispatching **MQTT** hardware tests to connected battery management systems (BMS)
- Architected a third-party data-replication service in **Node.js/Express**, cutting feature load times by **94.4%**
- Integrated **Microsoft Azure Active Directory SSO** with role-based access control, replacing legacy auth flows across the platform

## Projects

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### SplitMate 📄 | AI-Powered Bill Splitting iOS App

- Shipped a production iOS app to the **App Store** with **React Native**, **Expo Router**, and **TypeScript**, hitting an **8.76%** conversion rate (**2x** App Store average)
- Engineered an async receipt-scanning pipeline with **Google Gemini** OCR for itemized extraction and one-tap bill splitting
- Architected a stateless **Node.js/Express** backend on **Google Cloud Run** with an async job queue and **Upstash Redis** rate limiting

### LeetCode API 🔄 | Public REST API for LeetCode User Statistics

- Deployed a public **Python/Flask** REST API on **Google Cloud Run** aggregating LeetCode data via GraphQL, serving **200+** weekly users
- Cut upstream API calls by **80%+** and held **sub-100ms** p95 latency via **Redis** caching, served by **Gunicorn** (8 threads)

### MyEVE 🚗 | Full-Stack Electric Vehicle Marketplace

- Built a full-stack e-commerce marketplace with cart, orders, reviews, and **JWT** role-based auth using **React**, **Node.js/Express**, **Sequelize ORM**, and **MySQL**
- Containerized infrastructure with **Docker Compose** and integrated **AWS S3** for vehicle image uploads

## Technical Skills

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**Languages:** JavaScript, TypeScript, Go, Python, Java, C, SQL, Bash

**Frameworks and Libraries:** React, React Native, Next.js, Expo, Node.js, Express.js, Flask, Sequelize, Tailwind CSS, Vitest

**Cloud and DevOps:** AWS (EC2, Lambda, S3, Fargate), Google Cloud Platform (Cloud Run), Microsoft Azure (Active Directory SSO), Docker, Vercel

**Databases:** PostgreSQL, MySQL, Redis, MongoDB

**Tools and Protocols:** Git, GitHub, gRPC, Protocol Buffers, GraphQL, REST, WebSockets, Playwright, Mapbox GL, Datadog