

Mehrshad Farahbakhsh

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Education

York University

Sep 2021 – Aug 2026 (Expected)

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

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
- Built a **Slack** incident workflow with a **Bolt.js** bot and an **Express** + **Playwright** automation server on **AWS EC2**, enabling an **8-person** support team to file and auto-route **50+** weekly incidents to the right department, replacing ad-hoc engineer DMs

Full-Stack Developer (Co-op)

May 2024 – Aug 2025

KPM Power

- Developed a **MERN**-stack internal API-testing platform with server selection and endpoint browsing, dispatching **MQTT** hardware tests to connected battery management systems (BMS)
- Designed a **Node.js/Express** service replicating third-party data, cutting feature load times by **94%** (from 3 minutes to 10 seconds)
- Integrated **Microsoft Azure Active Directory SSO** with role-based access control, replacing legacy auth flows across the platform

Projects

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 for itemized extraction and one-tap bill splitting, using **Google Gemini** OCR with a **Node.js** job queue and **Redis** rate limiting on **Google Cloud Run**

XO 🎮 🌐 | Real-Time Multiplayer Game Platform

- Built a real-time multiplayer game backend in **Go** using **gRPC** server-side streaming, **Protocol Buffers**, and **PostgreSQL**, with optimistic locking to safely resolve concurrent move submissions
- Developed a **Next.js** + **TypeScript** client bridging the browser to gRPC via API routes, with proto contract checks and unit, integration, race, and e2e suites gating **GitHub Actions** CI

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)

Technical Skills

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

AI and LLM: Claude Agent SDK, Google Gemini API, agent orchestration, OCR pipelines

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, GitHub Actions, Prometheus, Vercel

Databases: PostgreSQL, MySQL, Redis, MongoDB

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