Aditya Chaudhary

(519)-731-0516 | a87chaud@uwaterloo.ca | linkedIn/aditya-chaudhary | github.com/a87chaud

Education

University of Waterloo — Waterloo, ON
BASc in Computer Engineering — *Sept 2021 – Apr 2026*

Experience

Miovision — *Software Engineer, Waterloo, ON* — *Sept 2025 – December 2025*

- Resolved critical **Kubernetes** job termination issues by provisioning dedicated **Karpenter** node pool with increased resource limits, eliminating random failures and reducing app runtime by 85%.
- Implemented a caching layer in a **Nest.js** Backend-for-Frontend, reducing backend service calls by **70%** and bringing API response times down to under **500ms**.

Miovision — *Software Engineer, Waterloo, ON* — *Jan 2025 – April 2025*

- Architected automated safety app validation pipeline using **Python + MQTT**, reducing regression testing time from 1 week to 45 minutes and enabling significantly faster beta releases.
- Built CI/CD pipeline using **Argo Workflows** on **Kubernetes** with integrated **AWS ECR** scanning, eliminating **15+ hours**/week of manual testing across 3 teams.
- Developed **Python** video processing service to overlay conflict detection paths on **1K+ daily** traffic videos, integrating with **Kotlin Spring Boot** backend for automated safety analysis.

The Toronto-Dominion Bank — *Software Engineer, Toronto, ON* — *Jan 2024 – April 2024*

- Engineered a **DataBricks** ETL pipeline to process **10K+** daily fraud transactions with automated transformations using **Python, Spark and Pandas**, data validation, and storage on Azure Data Lake Storage.
- Orchestrated ETL workflow using **Azure Data Factory** pipeline to convert Delta Lake data to CSV via Databricks PySpark with automated distribution, resulting in a **40%** reduction in reporting latency.

The Hi-Tech Robotic Systemz — *Software Developer, New Delhi* — *May 2023 – August 2023*

- Developed text to SQL query pipeline using **Flask**, **LangChain** and **OpenAI** API, enabling clients to query robot fleet data through prompts, reducing client requests to operations team by **40%**.
- Developed real-time monitoring dashboard using **Java Spring Boot** with WebSocket connections to **Angular** frontend, broadcasting live robot status updates for **50+** Autonomous Mobile robots.
- Designed serverless backend with **AWS Lambda** and **DynamoDB** Streams to process **500+** records/minute, implemented **SQS** dead letter queues and retry mechanisms for delivery to Spring Boot backend.

Lifeguard.org — *Full-Stack Developer, Toronto, ON* — *Jan 2022 — Apr 2022*

- Architected entire structure for a scientific collaboration platform using **Django** REST API, **React**, and MySQL on **AWS RDS**, building core features including user authentication and scientist networking from scratch.
- Built CI/CD pipeline with **GitHub Actions** to automate **Docker** builds, pytest unit tests, and deployments to **AWS Elastic Beanstalk**, reducing deployment time from **1 hour to 12 minutes**.

Projects

CV model benchmarking platform | *Python, AWS, Redis, Angular* — Oct 2025 – Present

- Building a platform that automatically benchmarks multiple computer vision model architectures on custom datasets, providing inference performance across edge devices (Jetson, RPi, Coral) and recommending optimal model-hardware pairings, reducing edge deployment research from weeks to hours.

Study.Io | *Kotlin + Android Studio* — May 2025 – Aug 2025

- Built Android learning platform using Kotlin with MVVM architecture, integrated OpenAI GPT-4 API for flashcard generation from PDFs. Utilized Firebase for authentication and storage. Implemented spaced repetition algorithm with Room database for offline persistence for 1000+ flashcards.

Technical Skills

Languages: Python, TypeScript, JavaScript, Kotlin, Rust, C/C++, Java, SQL, HTML/CSS
Frameworks: Spring Boot, Django, Flask, Nest.js, Angular, React, PySpark
Tools&Platforms: Git, Docker, Kubernetes, Kafka, Argo Workflows, Datadog, PostgreSQL, DynamoDB, Redis, AWS (Lambda, S3, RDS, ECR, SQS), Azure (Databricks, Data Factory, Data Lake Storage)