Viraj Murab

587-937-2653 | murab@ualberta.ca | LinkedIn | GitHub | LeetCode | Website

EDUCATION

University of Alberta

Sept. 2021 - May 2025

B.Sc. in Computer Science Edmonton, AB

• Relevant Coursework: Operating Systems, Distributed Systems, Machine Learning, Reinforcement Learning

Summary

Incoming Full Stack Developer at Air Canada, Former Full Stack Intern at Questrade (Canada's largest brokerage), Google DSC Tech Lead at the University of Alberta, Top 10% coder at Shipd (3,000+ applicants), and solved 750+ LeetCode problems (Contest Rating: 1600) — LeetCode Profile.

EXPERIENCE

Full-Stack Web Developer Intern

May 2023 – Aug. 2023

Questrade (Fintech)

Toronto, ON

- Enhanced policy flows using Angular, Node.js, and NoSQL, increasing engagement by 30%.
- Developed C# microservices for insurance sync, deployed via AWS ECS, improving reliability.
- Refactored CI/CD pipelines (Jenkins, CircleCI), reducing build times by 30%.
- Collaborated with cross-functional teams in Agile sprints to deliver features ahead of deadline.
- Architected scalable components to ensure system uptime across 10k+ clients.

Machine Learning Engineer – Published Paper

Jan. 2025 – Present

Edmonton, AB

University of Alberta — CS Research

- Implemented RTRL-based eLSTM and RTU models for real-time learning under partial observability.
- Achieved 30% improvement in rewards by integrating Actor-Critic methods in POMDPs like T-maze.
- Applied streaming and batch RL architectures using DQN, Stream-Q, and advanced performance analytics.
- Developed reusable prototypes to benchmark performance across distributed agents.

Product Owner & Backend Developer – SocialDistribution

Sept. 2024 – Jan. 2024

University of Alberta — Course Project (CMPUT404)

Remote

- Led development of real-time API-based interactions between decentralized nodes using Flask and Node.js.
- Integrated privacy settings and authentication into API endpoints, enabling public, private, and friends-only access control.
- Collaborated with a 6-person team in weekly stand-ups and code reviews, following Agile methodology.
- Investigated and resolved backend integration issues using logs and custom debug tooling.

PROJECTS

Poeltl Solver Extension | JavaScript, Flask

2025

- Browser extension to solve NBA guessing game **Poeltl** using DOM scraping + game heuristics.
- Flask backend filters 450+ player records with feedback loop and re-ranking logic.

Decoder Dash (Java, Firebase)

2023

- Built mobile QR scavenger game; synced player states using Firebase Realtime DB.
- Designed real-time leaderboard and QR scanning logic using Android SDK.

TECHNICAL SKILLS

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

Distributed Systems: gRPC, Kafka, Redis Streams, leader election, SLOs, consistency models

Infra: AWS (Lambda, ECS, EC2), Docker, Kubernetes, Terraform, TorchServe, Envoy

ML: PyTorch, TensorFlow, RTRL, actor-critic, scikit-learn

Other: React, Angular, Node.js, Flask, CircleCI, Jenkins, Postman