

Murphy Lee

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Education

University of Toronto

Sept 2022 - Expected June 2027

- **Program:** Computer Science (Specialist - Software Engineering Stream)
- **CGPA:** 3.99/4.0
- **Awards:** UofT Scholar (<1%), Trenwith CS (1 Student), James A Priestley Scholar (<1%), Dean's List Scholar (2023)

Work Experience

Cloudflare

Jan 2026 - Present

Software Engineer Intern

Austin, Texas

- Incoming intern on the Cloudflare D1 team, working on scalable database infrastructure and developer-facing platform features.

Amazon Web Services (AWS)

May 2025 – Aug 2025

Software Engineer Intern

Toronto, Ontario

- Architected a **distributed system** for testing AWS Sign-In, simulating all authentication paths across **250+ AWS consoles**.
- Reduced Ops Portal pipeline latency (across 15 AWS regions) by **13%**, via caching logic and concurrent deployments.
- Eliminated weeks of manual QA by automating the AWS Sign-In test suite in Java + TypeScript, covering end-to-end flows across **250 AWS consoles**.

Score Media and Gaming

Sept 2024 – Dec 2024

Software Developer Intern

Toronto, Ontario

- Shipped large features (bet-slip deep links, NFL real-time data), serving **5M daily active users** with under 100ms p99 latency.
- Reduced **50%** of manual QA time by creating a live-NFL-game simulator in Elixir, which streams data to the ingestion service.
- Migrated a Ruby on Rails monolith to Elixir microservices, scaling to **200k concurrent users** during NFL kickoff.

Toyota Canada Inc.

Jan 2024 – May 2024

AWS Developer Intern

Toronto, Ontario

- Implemented VPCs and serverless architecture using **API Gateway**, **Lambda**, **CloudFormation**, and more, resulting in a **20% reduction** in infrastructure costs and a significant increase in application performance.
- Utilized **15+ AWS Services** to develop multiple interactive **Cost Intelligence Dashboards** with forecasting and expense optimization, **reducing Toyota's AWS Billing** by over **\$10000/month**.

Morado Development

May 2023 – Dec 2023

Full Stack Developer

Toronto, Ontario

- Developed multiple applications for clients using Golang and React, leading to a **20% increase** in company revenue.
- Refactored database indexes and added Redis caching layer, decreasing API latency by **70%** under peak traffic.

Volunteer Experience

AMACSS | Vice President of Technology

Mar 2023 - Aug 2025

- Led an open-source initiative for first-year CS students, developing a UofT-wide Discord bot with **50+ features**.
- **Project-managed** the development of an admin-manageable club website with event registration, utilizing Next.js, PayloadCMS, Supabase (PostgreSQL), PostHog, and Stripe.
- **Instructed 500+ participants** in Python, Leetcode, SQL, and JavaScript during hackathons and technical workshops.

Google Developer Student Club | Director of Technology

Sept 2023 - June 2024

- Led the development of GDSC's GenAI Genesis Hackathon website, implemented in React (Next.js) and Firebase, leading to **1000+ applicants** and **300+ hackathon attendees**.

Projects

Pintos Operating System | C, Docker

- Implemented kernel components (thread scheduler, virtual memory, user program loader, and file system) in a lightweight OS.
- Designed a multi-level paging system with lazy loading, stack growth, and memory-mapped files to **optimize memory usage**.
- Enhanced file system performance by implementing sector caching with eviction policies, reducing disk I/O latency by **40%**.

Trading Engine | [GitHub](#) | C++, Kafka, Influx, Grafana, Docker

- Built a C++ trading engine processing 850k orders per second with 1.5 microsecond latency.
- Streamed per-order latency & throughput to Kafka → InfluxDB → Grafana to create a real-time metrics dashboard.

Eccountant | [GitHub](#), [Website](#) | Docker, TypeScript, Angular, PostgreSQL, Plaid, Ngrok, Redis

- Led the development of a centralized **financial application** which aggregates transactions over multiple bank accounts and includes subscription detection, using **Angular**, **Express**, **PostgreSQL**, and **Docker** (deployment).
- Judged by industry experts and ranked **2nd** out of **100+ students** in **CSCC09 - Programming on the Web**

Skills

Programming: Python, Java, JavaScript/Typescript, C, C++, Go, SQL, Elixir, Haskell, R, Ruby, Bash

Libraries/Frameworks: Angular, React, Next, Express, Phoenix, MongoDB, Spring Boot, PostgreSQL, Rails, Pandas

Tools: Docker, AWS, GCP, Azure, Apache, Firebase, Kubernetes, Datadog, Git, Linux, Shopify, Jira, JUnit, Postman, Android Studio

Concepts: Software Engineering, Backend Development, CI/CD, DevOps, Operating Systems, Networking, Embedded, Infrastructure