

Muhan Li

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EDUCATION

University of British Columbia

Bachelor of Applied Science, Computer Engineering – GPA: 3.8

Vancouver, BC

Sep. 2020 – May 2026

EXPERIENCE

Software Development Engineer

Sept. 2025 – Apr. 2026

Apera AI

Vancouver, BC

- Owned and built features end-to-end with React, Flask, and AWS for Apera Forge, a cloud robotics simulation platform
- Shipped feature for encrypted asset deployment from S3 to client machines, reducing client downtime by 200%
- Implemented real-time collision highlighting in Three.js, ensuring render performance (60+ fps) with memoized components
- Redesigned data sharing layer to enforce copy-on-share semantics, preventing unintended mutation of shared state
- Resolved production outages caused by API inconsistencies across AWS backend services

Software Developer

May 2025 – Aug. 2025

Natural Resources Canada

Vancouver, BC

- Built modular data dashboard with dynamic SQLite queries in Electron, reducing manual querying time
- Developed a file format conversion library, supporting text, database, and spreadsheet formats across all legacy versions
- Ported the ANSE simulation engine from Windows-only .NET to cross-platform, enabling Linux and macOS support

Software Developer

Jan. 2023 – Aug. 2023

UBC Cloud Innovation Center

Vancouver, BC

- Architected serverless applications for anonymous drug-checking and privacy-preserving video assessment workflows
- Engineered automated video pipelines using WebRTC and Rekognition for clip stitching and facial anonymization
- Enforced layered security with JWT, role-based access control, MFA, and API rate limiting (100 req/min)
- Defined infrastructure as code via AWS CDK to enable one-command deployment of backend resources

Software Test Engineer

May 2022 – Dec. 2022

Sierra Wireless Inc. (now Semtech)

Richmond, BC

- Migrated 30+ manual test cases to automated Python scripts, eliminating weekly 4-hour regression runs
- Collaborated with firmware and hardware engineers to diagnose and resolve modem crash errors
- Triaged customer reported issues, reproducing and escalating critical bugs to firmware team

TECHNICAL PROJECTS

Holdr – Artist Time Vault | Next.js, Nest.js, GraphQL, PostgreSQL

Sep. 2024 – Apr. 2025

- Architected Nest.js backend with PostgreSQL and S3 for secure file storage and streaming, scalable to millions of records
- Optimized Apollo Client queries and React Hooks to cut redundant re-renders by 50%
- Built API support for hierarchical file system, soft-deletion, and metadata tagging, preventing 90% of accidental data loss
- Enabled large file up/downloads with presigned URLs, reducing client-server payload size and load times by 70%

Find A* | Node.js, MySQL, prisma.io, Android

Sep. 2023 – Nov. 2023

- Designed and implemented a friendship system with MySQL and Prisma, enabling adds/removes via REST APIs
- Developed weighted review algorithm with peer feedback + time-decay, boosting user experience

TECHNICAL SKILLS

Languages: Typescript, Python, C++, C#, Javascript, HTML/CSS, SQL

Frameworks: React, Node.js, Nest.js, GraphQL, REST, .NET, Flask, three.js

Tools: Claude, Git, Docker, AWS, Jira, Ubuntu, Terraform