

Brian Qiu

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Education

University of Waterloo

Bachelor of Software Engineering

2020 – 2025

Work Experience

StackAdapt

May 2025 – Dec 2025

Backend Engineer

- Refactored backend advertiser data streams in **Go** and **gRPC** used by 100+ engineers to deliver customer insights, allowing for better downstream error handling
- Added rate limiters to **gRPC** client services by using **Grafana** to gather insights on request flow ultimately reducing CPU usage by ~40% during peaks
- Created blue-green deployment plan migrating from Hashicorp consul to Postgres for concurrent file ingestion locks processing millions of lines of advertiser data

LCBO Next

May 2023 – Aug 2023

Full Stack Developer

- Developed **React** application to target alcohol theft costing a projected 10 million dollars annually by allowing clerks to identify stolen inventory using smart tag technology
- Created additional endpoints in **Node.js** with **Postgres** to further leverage RFID to automate inventory management

BMO Capital Markets

Aug 2022 – Dec 2022

Quantitative Analyst

- Migrated futures basis arbitrage to **Scala** for better performance and stability
- Aggregated profit and losses on block trades to look for profitable patterns for analyst reports

Autodesk

Jan 2022 – Apr 2022

Full Stack Developer

- Built **React Typescript** application powered by backend in **Node.js**, **DynamoDB** to reduce time wasted in internal company meetings by indicating participant live speaking duration
- Conducted data analysis on presenter ordering, and estimated vs actual speaking time, showing people underestimate speaking times by 20% on average

Projects

Algorithmic Trading System

Sept 2022 – Now

- Developed realtime asynchronous trading systems using the **IBKR** Python API, diagnosing and fixing race conditions and file descriptor leaks under concurrent load
- Designed a backtesting framework using a versioned shared library allowing easy integration of backtested logic to live
- Architected a ZeroMQ + protobuf pipeline for rapid communication and event based processing, handling data for 40+ tickers (~160 ticks/sec) at under 3% CPU utilization

Skills

Languages:	Python, Go, TypeScript, C++, Rust
Frameworks:	React, FastAPI, Node.js, Spark, Airflow
Tools:	Docker, Grafana, AWS