

# Chengwen QU

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## SUMMARY

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**Multidisciplinary engineer with a unique background spanning engineering and modern software development.** I hold a bachelor's degree in Ocean and Naval Architectural Engineering and began my career as a naval architect, working on offshore energy projects. Since transitioning to software development during the Covid era, I've focused on building scalable, cloud-native applications and production-grade data systems.

## WORK EXPERIENCE

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### Trend Micro Canada

Senior Backend Software Developer (02/2023 - present)

- Designed and owned validator service in the new alerting microservice
- Co-designed and architected new alerting microservice for Trend Cloud One
- Worked on attack surface risk management AI companion app
- Optimized Java code performance by implementing caching strategies and algorithmic improvements
- Optimized legacy code and services, deployed to production using modern technology
- Troubleshooted issues and provide solutions related to forwarding of SIEM events for customers
- Mentored coop student

Backend Software Developer (11/2021 – 02/2023)

- Worked on data pipeline micro-service that enable 'near real time' replication between different databases and data storage technologies for large amount of data
- Delivered incremental improvements / features to production using CI/CD pipeline
- Wrote non-application code, such as infrastructure as code, pipeline as code, unit tests, metrics/alarms, monitoring etc.

### TechnipFMC

Project Engineer (2018 – 2020)

- Performed engineering work related to design, procurement, manufacturing and installation of offshore oil production structures
- Wrote offshore installation procedures detailing installation methods, sequence, required equipment, installation criteria
- Offshore execution of a work scope

## EDUCATION

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**Georgia Institute of Technology (2023 – present, part time online)**

Master of Science in Computer Science

**Algonquin College (2020-2021)**

College Diploma (Honours) – Computer programming

**Memorial University (2013-2018)**

Bachelor of Engineering

## PERSONAL PROJECTS

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### [Multi-threaded http library – Unix socket programming \(2024\)](#)

- Multi-threaded scalable http-based file sharing library

### [Software defined network \(2023\)](#)

- Router design and algorithm, BGP hijacking.

### [Stock trading website and ML trading agent \(2021\)](#)

- A virtual stock trading website where users can browse 5000+ stocks and their real-time price, buy and sell stocks.
- ML agent that maximize investment returns based on historical data.

### [Android App \(2020\)](#)

- User can pick dates and browse 10,000+ NASA images and its feature, vote favorites, etc., with PostgreSQL for data persistence.

### [Reconnect Class \(2020\)](#)

- An app for old classmates to see where everyone is on the map and catch up with each other. Friends can have a real-time chat in rooms.

### [Auctions Website \(2020\)](#)

- A auctions website where user can post and bid for items, with some built-in social media functionalities.

## SKILLS

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Technical: C, Java, Python, Go, JavaScript, SQL, PHP, Object-Oriented Design, Database schema Design, Data Engineering, Test-driven development

Technologies: Git, Bash, Gradle, Docker, AWS well-architected, Apache Kafka, Cloud Watch, Splunk, DynamoDB, Redis, SQS, SNS, AWS EKS, Fargate, AWS Step Function, Serverless framework