Chengwen QU

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SUMMARY

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

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

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

COURSEWORK & PERSONAL LEARNING PROJECTS

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

Programming: C, Java, Python, Go, JavaScript, SQL, PHP, Object-Oriented Programming, Data Storage 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