

Honglin Qu

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WORK EXPERIENCE

Software Engineer, TikTok

November 2023 - Present

- Architected and implemented scalable and robust **Golang, Python** and **Java** microservices, using technologies such as **RPC, Thrift, MySQL, Redis, Kafka** and **Kubernetes** to deliver live streaming features to global user base of over 1 billion.
- Built data products to provide meaningful and accurate data for different stakeholders with optimized performance.
- Took the initiative to refactor existing system such as data storage, services communication, and application logics, boosting several services' query performance by average of **150%**, significantly improving user experience.
- Implemented metrics middleware and alerting in various services, enabling proactive issue detection in service, leading to **80%** drop in number of my team's average on-call issues.

Software Engineer & DevOps, Spark

April 2023 - November 2023

- Implement and managed CI/CD pipelines for several key applications with over **500k** users using **Docker, Terraform, AWS** and **Azure** services.
- Developed internal tooling and platforms for managing on premise and cloud server builder dependencies using **React, Python, Java, Nodejs (Express)**, reduced storage space extensively and sped up applications build process, saving estimated value of **\$300k** annually.

Software Developer Intern, Akuna Capital

November 2022 - February 2023

- Designed, developed, tested, and maintained real-time market data visualisation applications using **C#, .Net, NUnit, JavaScript/TypeScript (React)** and **Python**.
- Used message brokers to retrieve **billions** of time series market data daily and wrote highly parallel program to filter and clean these data, integrated efficient storage with **TimescaleDB**, capable of handling complex queries within **0.3** seconds.
- Deployed applications using **Docker** and **Kubernetes. Prometheus** for metrics collection and **Grafana** for monitoring.

Software Developer Intern, Tidy

May 2022 - July 2022

- Migrated legacy backend infrastructure to modern stack, utilising **C#, .NET** and **Azure DevOps** with CLEAN architecture.
- Developed administrative portal for managing all customers' statuses with **React, TypeScript, C#** and **ASP.NET Core**.
- Added hundreds of unit tests and improved the test coverage of core project to **100%**, reducing frequencies of failures in several features by up to **75%**.

Graduate Teaching Assistant, University of Auckland

June 2022 - October 2023

- Led tutorials for over **200** students in courses: Object Oriented Programming, Web Development and Operating Systems.

SKILLS

DEVELOPMENT: Java, Golang, C# (.Net), Python, JavaScript/TypeScript (React), SQL, Redis, Kafka, Elasticsearch

DEVOPS: Linux, Git, Docker, Kubernetes, Terraform, AWS (DynamoDB, EKS, SQS/SNS, S3, Lambda), Azure, Prometheus, Grafana, ArgoCD

OTHER: Operating Systems, Networking, Software Architecture, Agile methodology, Data Structure and Algorithms

CERTIFICATIONS

Certified Kubernetes Application Developer (CKAD)

[View](#)

AWS Certified Solutions Architect – Associate

[View](#)

HashiCorp Certified – Terraform Associate

[View](#)

EDUCATION

Bachelor of Engineering with Honours - Software Engineering, University of Auckland

2020 - 2023

Engineering GPA: 8.6/9 (A/A+ Average) - First Class Honours

Faculty of Engineering Dean's Honours List - Top 5% in the cohort

VOLUNTEERING

Software Developer, Sydney Quant Traders

January 2023 - November 2023

- Designed and implemented new functionalities for the club's mock trading [website](#) using **React, Python** and **WebSocket**.

Software Developer & Tutor, Microsoft Student Accelerator

January 2022 - November 2022

- Designed and tutored a year-long curriculum focusing on **React, .NET 6, Firebase, WebSocket, CI/CD, AWS**.