SIM ZHI QI

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EDUCATION

Nanyang Technological University, Singapore - Renaissance Engineering Program (REP)   **Aug 2017 – Dec 2021**

- Bachelor's in Engineering Science (Computer Science) and Master of Science (Technology Management)
- Dean's List AY2018/2019, Renaissance Engineering Programme Scholarship - CGPA: 4.92/5.00
- Relevant Courses: Data Structures, Databases, Software Engineering, Net Centric Programming, Operating Systems, Object Oriented Programming, Human Computer Interaction, Distributed Systems, Blockchain, Info Retrieval
- Achievements: 3rd Place - CodeIT Suisse 2020 | Grand Finals (Top 6) – Singapore Airlines AppChallenge 2018

University of California, Berkeley - Concurrent with REP   **Aug 2019 – May 2020**

- Relevant Courses: Advanced Algorithms (CS 170), Computer Security (CS 161), Compilers (CS 164), Database Systems (CS W186), Back-End Web Architecture (INFO 253B)

TECHNICAL SKILLS

- Programming: Golang, Python, Java, SQL, JavaScript, ReactJS, Bash, Hack/PHP, Flutter, NodeJS, HTML & CSS
- Technologies: Git, Docker, Nginx, gRPC, REST, GraphQL, Relay, Ent, Redis, Prometheus, Grafana, AWS, Azure

WORK EXPERIENCE

Facebook, Singapore, Enterprise Engineer Intern   **May 2021 – Aug 2021**

Technologies used: ReactJS, Relay, GraphQL, Hack/PHP, Ent Framework

- Developed an object management system with ReactJS and Relay used by Facebook's internal security team
- Implemented GraphQL endpoints with Hack/PHP and Ent Framework for data transfer

Government Technology Agency, Singapore, Software Engineer Intern   **Aug 2020 – Jan 2021**

Technologies used: Java, Scala, Bash, Gatling, ReactJS, OutSystems – using Agile Methodology developing for CICD pipelines

- Designed and developed an automatic load testing system to be part of the CICD pipeline with Gatling and Java
- Implemented an internal data management tool for easy data analysis resulting in savings of developer hours
- Designed and implemented a prototype for a contract builder with ReactJS to trial a new feature with stakeholders

Shopee, Singapore, Software Engineer Intern   **May 2020 – Aug 2020**

Technologies used: Golang, Python, Nginx, gRPC using Micro-service and Backend-For-Frontend (BFF) Architecture

- Designed and developed a micro-service application to track prices of Shopee's items and optimise it through various methods such as load balancing to achieve queries-per-second on API endpoints of 500 when ran locally
- Migrated Feature Toggle API endpoint of 40K QPS in live environment from Python Django to the BFF Architecture in Golang resulting in an improvement of performance and resource utilisation by more than 6x
- Conducted stress testing and profiling on services to find bottlenecks and optimisations to improve efficiency
- Designed and implemented an internal CLI tool for services and libraries releases to support parallel versioning with well documented changelogs using Golang resulting in savings of numerous developer hours

NCS Pte Ltd, Singapore, Software Engineer Intern   **May 2019 – Aug 2019**

Technologies used: Java Spring Framework, JavaScript, SQL using Model-View-Controller (MVC) Architecture

- Developed full-stack features including a file tracker feature to track important files and documents in an enterprise web application used by over 1000 users helping them work 50% faster by automating certain processes
- Implemented REST APIs using Java Spring to transfer data between web application, servers, and database
- Optimised server management by developing a scheduler and multiple batch jobs for data synchronization

PROJECTS

CareerPace – Career matching platform to assist job seekers in refurbishing their skillsets for a career change

- Designed and developed backend web servers using Golang for the web application with AWS services

Renaissance Capstone Project – Aircraft Engine Predictive Maintenance System with Online Machine Learning

- Architect and developed a software system with multiple services running on IoT Edge devices and Azure Cloud

AirVenue - Singapore Airlines AppChallenge 2018 – Grand Finals (Top 6 out of 93 Teams)

- Developed a mobile application with Flutter that featured a matching feature, live chat feature and a live chatbot