

Yangtao Ge

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EDUCATION

- **University College London** London, UK
Master of Engineering (MEng) in Computer Science; Degree Award: First Class Honours *Sept. 2018 – Sept. 2022*
- **University College London** London, UK
Undergraduate Preparatory Certificate; Avg. Score 86/100 *Sept. 2017 – June. 2018*

PROFESSIONAL SUMMARY

Accomplished Backend Software Engineer with two years of experience at Smartsheet and prior internships at Spotify and R3. Specializes in building and managing scalable microservices on AWS platforms like EKS and ECS, and proficient in developing robust CI/CD pipelines and infrastructure solutions with Terraform. Currently a Software Engineer II, I manage and own key services from inception to deployment, collaborating effectively with cross-functional teams. Committed to broadening my software engineering expertise while deepening my specialization in cloud infrastructure and security, I am actively developing into a T-shaped professional with comprehensive knowledge and deep technical skills.

PERSONAL SKILLS

- **Programming Languages:**
 - **Java:** Proficient in building scalable server-side applications using Spring Framework and Gradle.
 - **Golang:** Proficient in building concurrent applications, primarily for microservices using Chi and Gin frameworks.
 - **Python:** Skilled in scripting and automation, as well as backend development with AWS Lambda.
 - **Other Languages:** C/C++ (Competent); JavaScript (Proficient); SQL (Proficient)
- **Cloud Platform & Tools:**
 - **AWS:** Experienced with EC2, SQS, S3, and Lambda for cloud-based applications building with **terraform**
 - **Docker:** Strong capabilities in containerization and version control of deployment environments.
 - **Kubernetes & ECS:** Proficient in orchestrating and managing containerized applications in AWS EKS and ECS
- **DevOp & Analytic:**
 - **GitLab/GitHub:** Proficient with git for version control and building CI/CD pipelines.
 - **OpenSearch:** Implemented for search and log analysis solutions using Fluentd in containerized environments.
 - **Datadog & Grafana:** Proficient in building interactive dashboards for real-time data visualization and analytics.

WORK EXPERIENCE

- **Smartsheet** London, UK
Software Engineer II *Jan. 2023 - Present*
 - **Golang Microservices:** Developed backend API services using the Golang CHI framework to facilitate access to cell history data from an S3 bucket. Optimized data retrieval processes by implementing parallel fetches with goroutines, enhancing performance by 20% on P95 latency measures.
 - **ECS Deployment and Optimization:** AWS ECS cluster to deploy containerized microservices, enhancing system scalability and reliability. Optimized auto-scaling and resource allocation through rigorous load testing with Locust, achieving a 20% reduction in operational costs.
 - **Analytic Tool Integration:** Integrated FluentD as a log layer to streamline the delivery of application logs to OpenSearch via AWS Kinesis Stream. Developed and implemented a Datadog dashboard for real-time data visualization, significantly enhancing incident response times by enabling quicker issue identification.
 - **GitLab CI/CD Pipeline:** Implemented deployment pipelines using GitLab Runner for automated validation and promotion of container images. This initiative accelerated the team's development cycle by 50%, improving deployment efficiency on AWS ECS clusters.

- Spotify** London, UK
Backend Engineer Intern *June. 2022 - Sept. 2022*
 - Java Microservices:** Developed backend microservices using the Apollo framework and gRPC, which enhances music delivery processes and service efficiency for both music providers and Spotify operatives.
 - Testing Enhancement:** Authored technical documentation outlining key strategies for testing improvements, which was instrumental in increasing code coverage from 75% to 90%, substantially boosting application reliability
 - Operational Integration:** Engineered a Slack notification workflow that automatically informs Spotify operatives of stakeholder status updates, enhancing operational communication and responsiveness.
- R3** London, UK
Solution Engineer *June. 2021 - Sept. 2021*
 - Confidential Computing Development:** Actively contributed to the enhancement of the Conclave example codebase utilizing Kotlin and Java, which has been utilized in commercial sales processes, demonstrating practical applications of confidential computing in business solutions.
 - Corda Certification:** Successfully passed Corda Developer Certification Exam, validating expertise in enterprise blockchain technology such as distributed ledger and contracts. [Credly Credential]
- Healios** London, UK
React Native Developer *Dec. 2020 - Jun. 2021*
 - React Native Development:** Participated in the development of "ThinkNinja," an NHS-affiliated app designed to educate children about mental health, utilizing React Native and TypeScript. Successfully implemented multi-language support, which enhancing user accessibility and engagement.
 - Code Quality and Efficiency:** Improved code robustness and maintainability by integrating TypeScript and ESLint. Optimized development workflows by configuring Redux for state management and Redux-Saga for handling asynchronous operations, thereby boosting overall code efficiency.
 - Continuous Integration and Testing:** Integrated TestFairy to streamline internal app distributions. Developed and implemented a continuous integration pipeline that reduced deployment cycles by 30%, substantially enhancing team productivity and application reliability.
- EMIS Health Group** London, UK
Software Engineer Intern *Jun. 2020 - Sept. 2020*
 - Middleware Development:** Developed a middleware using Node.js and AWS Lambda to facilitate data mapping between two service components within the EMIS Clint project. Successfully integrated the solution into the company's codebase, enhancing system interoperability.
 - Cost Efficiency Analysis and Optimization:** Conducted a comprehensive cost analysis of data storage solutions on AWS RDS, leading to a strategic proposal to migrate to DynamoDB. This initiative reduced costs by 60% while maintaining performance levels, demonstrating significant savings and operational efficiency.
 - Cloud Infrastructure Management:** Utilized AWS CloudFormation to manage DevOps pipelines and DynamoDB schemas, ensuring robust and scalable cloud infrastructure. Implemented AWS IAM strategies to enhance security through stringent access controls.

PROJECTS

- Fuzz Testing for DPC++** London, UK
Individual Project Researcher *Sept. 2021 - Jun. 2022*
 - DPC++ Fuzzing Framework:** Wrote a dissertation to propose the first fuzzing framework for DPC++ which includes an instrument tool to track the coverage and a fuzzer to generate test inputs. Establish a DPC++ code collection to benchmark the testing framework effectiveness.
 - LLVM & Clang:** Implement the testing framework under LLVM compiler infrastructure and use Clang LibTooling API to instrument target program automatically on AST level.
- Ophidia Technologies: Smart Label Project** London, UK
Tech Team Leader & Full stack developer *Jun. 2021 - Dec. 2021*
 - Leadership and Architecture Design:** Led a team of three software engineers in the design and development of a full stack application for smart e-ink labels. Spearheaded the software architecture planning, ensuring optimal integration of front-end and back-end components for enhanced performance and scalability.
 - Dockerization and Pipeline:** Successfully dockerized the backend API, facilitating smoother, more reliable deployments. Engineered and deployed a CI/CD pipeline on AWS, improving development workflow and deployment efficiency by automating updates and testing processes.