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 full-time experience at Smartsheet, enhanced by internships at Spotify and R3. Specializes in building and managing 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

- **Java**: Excellent skills in building server-based applications using Java and related frameworks including Netty protocol, Spring Boot and gRPC protocol over actual production environment in large scale projects.

- **Golang**: Good understanding of Golang and experience in developing microservice backend RESTful API using Gin framework.

- **React Native**: Proficient in developing using React Native and Redux to implement mobile apps for both Android and IOS Platform and creating releases using TestFairy.

- **JavaSript, TypeScript & Node.js**: Good understanding of JavaSript and its extension language and able to use those languages to create both backend (Express) and frontend (React.js).

- **C/C++**: Fundamental understanding of C++ in the LLVM framework and Clang compiler and also usage of CMake to build C++ project using Ninja.

- **SQL & NoSQL**: Good knowledge in managing SQL databases on Java Spring Boot using JPA and using node.js to manipulate NON-SQL databases such as AWS DynamoDB using Node.js.

- **Dockerization and Cloud Services**: Industrial experiences in Google Cloud, Azure and AWS web server and database services, and experience in dockerizing web servers as images and deploying CI/CD pipeline.

- **Git & Verison Control**: Good knowledge of using git and GitHub to do local and remote version control.

- **Other Programming Languages**: Python, Haskell, Shell, C#, LaTeX.

WORK EXPERIENCE

- **Spotify** London, UK
  Backend Engineer   *June. 2022 - Sept. 2022*
  - **Microservice with gPRC**: Develop backend API services using the Apollo framework and gRPC protocol to support music providers and Spotify operatives for accelerating music delivery.
  - **Testing Improvement**: Write technical documents which suggest possible testing improvements for the squad and improve the code coverage from 75% to 90%.
  - **Slack Workflow Integration**: Implement a message notification workflow in Slack to notify Spotify operatives of the status changes of their stakeholders.

- **R3** London, UK
  Solution Engineer   *June. 2021 - Sept. 2021*

- ○ **Kotlin & Java**: Use Kotlin and Java to implement a framework using Intel SGX confidential computing enclave to safely match data from different clients.
- ○ **Conclave**: Contribute to the Conclave example codebase and is used for the current commercial sale process.
- ○ **Corda Certification**: Qualified from both internal examination and certification examination.

- **Healios** London, UK
  React Native Developer *Dec. 2020 - Jun. 2021*
  - ○ **React Native**: Use React Native Framework and TypeScript to develop an NHS app called *ThinkNinja* for children from 10 to 18 years old and allow them to learn about mental health and emotional wellbeing.
  - ○ **TypeScript & Linting**: Use and configure TypeScript and ESlint to ensure the robustness of the code across the developing team.
  - ○ **Redux and Redux-Saga**: Use Redux to maintain and transient the app state and use Redux-Saga as the Redux middleware to handle the side effect of the application.
  - ○ **Internationalization**: Implement the internationalization framework to support multiple languages and create the customized Text component which allows other developers to use them as international language labels and replace the display in configuration files.
  - ○ **TestFairy**: Using and maintaining the TestFairy tool to provide app distribution within the developing team and create continuous integration pipeline for app build.

- **EMIS Health Group** London, UK
  Analytic Team Software Developer *Jun. 2020 - Sept. 2020*
  - ○ **Node.js and TypeScript**: Use Node.js to produce a middleware to generate a many-to-many mapping between two service components within the EMIS Clint project and publish it onto the company code base.
  - ○ **API Platform**: Create and deploying the internal-used API onto Amazon Serverless services and implement the Jest test to ensure the robustness from high coverage test suit.
  - ○ **AWS Cloud Services**: Use AWS CloudFormation to maintain DevOp pipelines and DynamoDB schema for the project on the cloud, AWS IAM strategies are used for ensuring the minimum access control.

- **Skogame Ltd.** Shanghai, China
  Mobile Gaming Backend Developer *Jul. 2019 - Sept. 2019*
  - ○ **Java Web Server on Netty**: Develop the logic of the top-up function with its API which allows players can charge money to buy game currency and Develop other related time-limited top-up activities.
  - ○ **Unit & Integrate Testing**: Develop a robot-user sample and a Tester app for testing the maximum capacity and vulnerability of the game server.
  - ○ **Databases**: Maintain the two online servers and inspect both MySQL and Redis databases to ensure the working performance of the game server.

Projects

- **Fuzz Testing for DPC++** London, UK
  Individual Project Researcher *Score: 70/100*
  - ○ **Fuzzing Framework**: Write a dissertation to propose the first fuzzing framework for DPC++ and create a dataset to benchmark the testing frameworks effectiveness.
  - ○ **LLVM & Clang**: Implement the testing framework under LLVM compiler infrastructure and use Clang LibTooling API to instrument the target program automatically on the AST level.

- **Ophidia Technologies: Smart Label Project** London, UK
  Tech Team Leader & Full stack developer
  - ○ **Architecture Design**: Lead the software engineering team with 3 members and design the software architecture for the full stack application for smart e-ink label.
  - ○ **Dockerization and Cloud Integration**: Dockerize the backend API as a docker image and create a CI/CD pipeline for continuous development onto AWS cloud service

- **AMEX Challenge Hackathon** London, UK
  Full Stack Developer *Best Design Prize*
  - ○ **Mobile App Developing**: Use React Native including google map components and redux design to create a mobile app for the 'ShopSmall' schema for helping both customer and partner shops.

- ○ **Architecture Designing**: Design and develop the backend API server in Express framework using Node.js and add authentication token to API request for data security.

- **AI For The Common Good Hackathon**   London, UK & Paris, France
  Frontend Developer & Team Leader   *Top 3 Project Prize*
  - ○ **Project Structure Designing**: Make the project brief and MoSCoW list for making a mobile web app for feeding language learning materials based on users' preferences and chatting with other learners.
  - ○ **Frontend UI Developing**: Develop the user interface using React.Js and Framework7 to make a Progressive Web App (PWA) for mobile phones and deploy it on remote web servers.

- **Visual Mapping App for ANCSSC**   London, UK
  Backend Developer   *Score: 76/100*
  - ○ **API Provider Developing**: Use Java Spring Boot to provide APIs for the frontend to obtain the NGOs' project coordinates and specific information of the project on Azure Web Server.
  - ○ **Server Deployment**: Use Azure Web Server to deploy the API provider of the tool and initialise the Azure Pipeline to execute the auto deployment.