YUQI GUO

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EDUCATION

Syracuse University (SU) Syracuse, New York
M.S: Computer Science (GPA: 3.7) 08/2022-05/2024(Expected)
University of Liverpool (UoL) Liverpool, UK
B.S: Computer Science (GPA: 3.6/4, *First Class*) 09/2017-07/2022
Relevant Courses*:* Data Structure, Algorithm, Operating System, Database, Computer Network, Human-Centric Interaction, Software Engineering, Mobile Computing, Computer Graphics, Machine Learning

TECHNICAL SKILLS

Languages: Java, Python, HTML5, Haskell, PHP, MySQL, SQLite, MongoDB, Node.js, C#, Git
Frameworks/Libraries: TensorFlow, JUnit, Spring Boot, React, Linux, Vue.js, Hadoop, Node.js
Platforms: Vercel, Heroku, Supabase, Firebase and AWS (ECS, EC2, S3, Cognito, etc.)
Tools: Postman, Docker & Kubernetes, GitHub, Swagger UI, JWT Authentication/Authorization
Proficiencies: Java Web, Android Programming, Agile Projects, OOP, Computer Network, Database, Data Mining, Machine Learning and Computer Vision (CV), QA Test, E2E Test

WORK EXPERIENCE

CuraStone Corp Bellevue, WA, United States
Software Development Engineer Intern 08/2023-12/2023

- Spearheaded the creation of an app transforming PDFs and other materials into interactive flashcards, learning series, and study plans using **Spring Boot** (following Google Java format) and **MongoDB** on **AWS ECS**.
- Engineered and implemented secure backend APIs using JWT/Cognito. Additionally, integrated robust testing frameworks (such as **Mockito**, **JUnit**) to ensure seamless frontend compatibility, further enhanced by incorporating **Swagger 2**.
- Elevated code quality and project efficiency by leading comprehensive Code Reviews, and strategically managing branches and commits with advanced git tools (like **cherry-pick**, **rebase**, **squash**, **merge,** etc.), resulting in more streamlined and error-free code deployments.
- Executed comprehensive **End-to-End (E2E)** testing via **Newman**, guaranteeing optimal service functionality and reliability.
- Orchestrated application on **AWS ECS**, leveraging container orchestration and ensuring high availability with **Load Balancer**.

Tree Technology Co., Ltd. Suzhou City, China
Software Development Engineer Intern 06/2020-08/2020

- Collaborated on the development of an online platform for image annotation, enhancing user interaction and data management.
- Led backend development, focusing on efficient data storage solutions. Implemented modules to store annotation data in **JSON** format, facilitating seamless conversion into various formats using Java.
- Integrated **MyBatis** for database interactions and utilized **Vue.js** to craft user-centric web modules, streamlining user login, image upload/download, and efficient querying of both image and annotation data.

PROJECTS

Net Disk Storage for Large Files (Python via UDP Socket) 09/2019-12/2019

- Introduced a custom pipelined protocol using **UDP socket**, replacing the traditional stop-and-wait method. Significantly optimized bandwidth for both large file uploads and downloads.
- Incorporated **Cipher Block Chaining (CBC)** encryption within the transmission pipeline, ensuring data security and reliability.
- Adhered to **Consistency, Availability, and Partition-Tolerance (CAP)** principles during multi-threaded operations, facilitating efficient and simultaneous file uploads and retrievals in the net disk system.

On-campus Club and Organization Community (Android Based on Java, XML, and MySQL) 03/2020-06/2020

- Oversaw a group of 7 people in developing OCOC (On-campus Club and Organization Community), an **Android**-based social application for universities, improving communication efficiency between student organizations and students.
- Took charge of implementing essential features and designing a user-friendly interface, incorporating navigation and search bars to facilitate intuitive navigation within the application.
- Accomplished **MVC architecture**, integrated **MySQL** database for user and activity management, and addressed problems such as permission management and image storage.

Smoke Detection and Short-Term Movement Prediction (Python via TensorFlow) 09/2020-03/2022

- Designed and developed a robust model using **Mask-RCNN** and **ConvLSTM** to address critical challenges in smoke leakage detection, short-term smoke movement prediction, and identification of smoke origin for effective rescue operations.
- Implemented **Mask-RCNN** to achieve precise smoke detection, leveraging its anchor and segmentation output to accurately locate the source of smoke.
- Utilized **ConvLSTM** to forecast short-term smoke movement patterns, providing valuable insights for anticipating and identifying areas affected by smoke pollution.