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, Kotlin, 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 | *Spring Boot*, *MongoDB*, *Docker* & Kubernetes 08/2023-12/2023

- Developed an app to convert PDFs into interactive flashcards using **Spring Boot** and **DynamoDB** on **AWS ECS**, effectively processing over 5,000 documents in two months. Secured APIs using **JWT**/**Cognito**.
- Integrated **Mockito** and **JUnit** for robust testing, ensuring seamless frontend integration and enhanced user experience. Employed **Swagger 2** for API documentation and testing.
- Implemented **Newman** E2E tests within GitHub Actions for automated service monitoring and rollback, achieving 99.9% service availability.

Tree Technology Co., Ltd. Suzhou City, China
Software Development Engineer Intern | *MyBaits*, *Vue.js* 06/2020-08/2020

- Developed an online image annotation platform, enhancing user interaction and data handling, resulting in a 25% increase in user efficiency.
- Led backend development for efficient data storage, creating modules to store annotation data in **JSON**, using Java for versatile format conversion, improving processing speed by 30%.
- Integrated **MyBatis** for efficient database interactions and employed **Vue.js** to craft intuitive web modules, streamlining user login, image upload/download, and data querying processes.

PROJECTS

Net Disk Storage for Large Files | *Python via UDP Socket* 09/2019-12/2019

- Developed a custom pipelined protocol over **UDP** socket to replace the conventional stop-and-wait method, enhancing transmission efficiency by 33% 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 Firebase* 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.
- Directed the implementation of key features and the design of a user-friendly interface, featuring intuitive navigation, search bars, and custom views, all optimized with multithreading for smoother user interaction.
- Implemented the MVC architecture, integrating a **real-time database** for information storage, **authentication** for secure user login/signup, and efficient image storage solutions via **storage**. Additionally, resolved critical issues like permission management and image file handling.

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

- Developed a **Mask-RCNN** and **ConvLSTM** based model for detecting smoke leaks and predicting their movement, achieving a 95.67% accuracy in identifying smoke origins for rescue operations.
- Implemented **Mask-RCNN** to achieve precise smoke detection, leveraging its anchor and segmentation output to accurately locate the source of smoke.
- Leveraged **ConvLSTM** to predict short-term smoke movement patterns, enhancing the accuracy of these predictions up to 76.454%, thereby providing crucial insights for anticipating areas impacted by smoke pollution.