# 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)
**Xi'an Jiaotong-Liverpool University (XJTLU)** Suzhou, China
**B.S**: Computer Science (GPA: 3.46/4, *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/Platforms:** TensorFlow, JUnit, Spring Boot, React, Linux, AWS (ECS, EC2, S3, Cognito), Vue.js, Vercel
**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)

## WORK EXPERIENCE

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

- 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 backend services aligned with the **Technical Requirements Document (TRD)**, employed **JWT/Cognito** to secure APIs' connection. Employed **Mockito** and **JUnit** for robust testing, and integrated **Swagger 2** for frontend compatibility.
- Conducted thorough Code Reviews on **GitHub** to ensure code quality and utilized **git** tools like **cherry-pick** and **rebase** for efficient branch management and commit synchronization.
- 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**.
- Enhanced the application's pedagogical features by integrating LLM-based technology via LangChain and refined user interactions by architecting a streamlined pipeline API for efficient data processing.

**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.