Zeyu Gu

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EDUCATION

Yale University   New Haven, CT
Master of Science in Computer Science   September 2022 - May 2023(Expected)

Boston University   Boston, MA
Bachelor of Arts in Computer Science   September 2018 - May 2022
- GPA: 3.94/4.0
- Dean's List

PROFESSIONAL EXPERIENCE

Software Engineer Intern   June 2022 - August 2022
CertiK   Remote, US
- Took part in the **full-stack** development of SkyHarbor, a **NextJs** based web application that facilitates efficient smart contract auditing process
- Integrated the Slack and Discord Bot APP with SkyHarbor to support multi-platform client notification
- Developed the **UI, backend API, Slack and Discord bot** for the client notification service
- Developed UI automated test suite using the **Jest** framework
- Improved user experience by refactoring file upload logic for UI optimization and implementing new feature pop-up notification

Quality Assurance Engineer Intern   May 2020 – August 2020
ByteDance   Beijing, China
- Conducted API testing, test case design, and test script writing for an enterprise application
- Wrote automated API testing scripts in **Java** using **TestNG** framework, which could replace 50% of the manual testing process and identify major functional bugs
- API test scripts achieved 70% overall code coverage rate and 100% coverage rate for major API functions
- Wrote **Jenkins** Pipeline Script to implement automated testing continuous integration

Software Engineer Intern   August 2019 – September 2019
Microsoft Asia-Pacific R&D Group   Beijing, China
- Designed and implemented a multi-functional chatbot service using **Python** and **WeChat Python SDK**
- Independently developed the WeChat chatbot, deployed to **Linux** server, and integrated **third-party APIs** to execute certain chatbot functions such as auto-reply, package delivery tracking, recipe searching and weather report
- Implemented user intent recognition by leveraging the Microsoft **LUIS** language understanding service

TECHNICAL SKILLS

Languages: Python, Java, Javascript, Go, C, SQL, HTML
Frontend Technologies: React, NextJS
Backend Technologies: Express, Docker, Kafka, MySQL, MongoDB, Redis
Machine Learning: PyTorch, Numpy, Pandas, Matplotlib
Testing: Jest, Cypress, TestNG

PROJECTS

Graph Analytics With Flink StateFun | *Java, Flink, Kafka, Docker*   February 2022 – May 2022
- A graph analytics application built with **Flink Stateful Functions**
- Implemented a set of graph queries API that can be used to perform general graph analytics on connected temporal graphs
- Fully utilized the functionalities of **Flink Stateful Functions** and **Kafka** message queue to process streaming graph data and simplified application deployment using **Docker**

Automatic Waste Detection | *Python, PyTorch*   February 2022 – May 2022
- A research oriented project based on the ZeroWaste dataset, exploring different object detection models and optimization techniques on waste material detection in images
- Explored and fine-tuned three major models: **YOLOv4**, **YOLOR**, and **Dynamic R-CNN**
- Implemented optimization techniques like **Mosaic**, **Mixup**, **Dropblock regularization** etc. and significantly improved model performance
- Best result achieved **62.1 in AP**, **74.2 in AP50**, and **67.7 in AP75**, which was better than the result gotten by the original authors of the ZeroWaste paper

Media Roulette | *NodeJs, PUG, MongoDB*   October 2020 – December 2020
- A web app capable of making playlist suggestions based on the weather information at the user's current location
- Implemented **OAuth-based** third-party sign-in function and backend logic for fetching Spotify Playlist
- Served as technical lead in the team and helped other team member with database setup and page content generation