HSUEH YUAN, KU

denon@xueyuan.dev

EDUCATION

Georgia State University 2023 - Present
MS, Computer Science
National Taiwan University of Science and Technology 2016 - 2020
BS, Computer Science and Information Engineering, ***Major GPA: 3.2***
Thesis Dissertations: Hsuehyuan Ku, Yuxiang Lin, and Shinming Cheng, "Spreading False Public Warning Messages through a Forged LTE Base Station", *CISC 2020*

SKILLS

Programming C, C++/Modern C++, Golang, Python, JavaScript, Shell
Techniques WebSocket, RabbitMQ, PostgreSQL, Redis, MongoDB, ELK, Docker/K8S

WORK EXPERIENCE

TeamT5 Taipei, Taiwan
Backend Engineer *Jun 2022 - Current*

- Write unit and integration test extensions for pytest and introduced them to the project to enhance code quality and service stability.
- Designed and built a document system that generates a swagger document and test environment for each pull request to bring convenience to other developers.
- Designed new architecture for our core service. This refactor increased QPS by 20 - 30%.

Ucfunnel Taipei, Taiwan
Project Leader *Jul 2021 - Dec 2021*
Backend Engineer *Apr 2021 - Jun 2022*

- Led a team of 3 engineers to develop an e-commerce platform, and introduced CI/CD, and failover clustering to increase development efficiency and improve system stability.
- Designed the product uploading system using a message queue that batch background process to improve user experience.
- Designed the live stream service using the websocket that syncs Facebook Live and Chat to make our customers stream on our platform.
- Designed the webhook service for our customers.
- Improved ad searching system efficiency by 47%.

NICT Tokyo, Japan
Intern *Jan 2020 - Feb 2020*

- Designed and implemented the visualization software and scoreboard for the CTF contest.

PROJECTS

Talkaway: An online English tutor app using TTS, STT, and GenerativeAI.
Spoofing Alert: Implemented System Information Blocks 10, 11, and 12 in open-source SDR which satisfied 3GPP TS 38.331 so that it can send a false alert by the malicious base station. (Thesis Implementation)
Lightweight Web Server: Implemented a web server and common gateway interface using C. The server serves static or dynamic content.
Red: A URL shortening service with over 100 active users. It is built with Vue.js, FastAPI, Redis, and PostgreSQL.
ABRB: An arbitrage program with an expected 3+% internal rate of return in the blockchain market.