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++14, Golang, Python, JavaScript, Shell
Techniques	WebSocket, RabbitMQ, PostgreSQL, Redis, MongoDB, ELK, Docker/K8S, Nginx

WORK EXPERIENCE

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

- Implemented pytest-based unit and integration test extensions, significantly improving code quality and service reliability.

- Created a document system that automatically generates Swagger documentation and test environments for each pull request, streamlining the development process for other team members..

- Revamped the core service architecture, resulting in a 20~30% increase in QPS.

Ucfunnel   Taipei, Taiwan
Backend Engineer   *Apr 2021 - Jun 2022*

- Designed a product upload system with a message queue for efficient batch processing, enhancing user experience.

- Developed a live streaming service integrated with WebSockets, enabling real-time synchronization between Facebook Live and Chat, allowing seamless streaming on our platform.

- Implemented a webhook service customized to our customers' needs.

- Improved advertising search performance by 47% through Redis and lazy loading.

- Established CI/CD pipelines and implemented database failover clustering for enhanced development efficiency and system stability.

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

- Designed and executed the development of visualization software and a scoreboard for the Capture The Flag(CTF) contest.

LEADERSHIP

Project Leader @ Ucfunnel   *Aug 2021 - Dec 2021*

- Led a cross-functional team comprising 3 engineers and 1 project manager in the development of an e-commerce platform.

- Oversaw the efficient allocation of both human and technical resources, optimizing team productivity and project outcomes.

Leader of Department Basketball Team @ NTUST *Sep 2018 - Jun 2019*

President of Student Association of Computer Science Department @ NTUST *Sep 2017 - Jun 2018*

- Co-hosted a university assembly with NTUST and successfully increased the Students' Association's budget by 20%.

- Used the increased budget to sign contracts with 15 nearby stores to provide student discounts.

PROJECTS

- **Talkaway (Startup Project)**: Led the design and development of an English AI tutoring. I was responsible for designing the overall system architecture , feasibility research, backend development(Python/FastAPI), and partial mobile development(Switft/IOS). Anticipated product launch in the upcoming spring.

- **Spoofing Alert (Thesis/Research Project)**: Establishing a malicious base station and leveraging open-source SDN (Software-Defined Networking) to implement SIB 10, 11, and 12 for sending simulated presidential alerts.

- **Policy Petition Website**: This is a website for petitioning against a specific policy, which includes campaign materials, speech information, and has a backend with editable content. It is accessed by 1000+ users.

- **Red (URL Shortening Service)**: Built a URL shortening service with an active user base of over 100, utilizing Vue.js, FastAPI, Redis, and PostgreSQL.

- **ABRB**: Developed an arbitrage program designed for the blockchain market, projected to achieve an expected internal rate of return exceeding 3%.

- **Lingram**: This is a Telegram bot that can help you package Line platform stickers for use on Telegram.

- **Phorm**: This is a Python package that can be used to fill out Google Forms.

- **Lightweight Web Server**: Created a web server and common gateway interface using C, capable of serving both static and dynamic content.