

Hsu-Huai (Aaron) Tsai

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EDUCATION

University of Illinois, Urbana-Champaign

MS in Computer Science

Champaign, Illinois

Aug. 2024 — Dec. 2025

National Taiwan University

BS in Computer Science

Taiwan

Sept. 2019 — Dec. 2023

- GPA: 3.93/4.0

SKILLS

Programming Languages: Javascript, Java, C++, Python, Typescript

Web Development: HTML/CSS, React.js, Backend, Spring, Automated Tests, Redis, MongoDB, SQL, Kafka

DevOps: GitHub Action, CI/CD, Docker, Kubernetes, Grafana, Prometheus, Linux, Unix, Bash, DNS

WORK EXPERIENCES

Binance

Taiwan

Software Engineering Intern (Backend)

Oct. 2023 — Feb. 2024

- Achieved a 70% performance improvement in essential APIs by implementing asynchronous calls.
- Optimized Dockerfile for vital internal services, reducing build time by over 40%.

LINE

Taiwan

Software Engineering Intern (Full-Stack)

July 2022 — June 2023

- Independently migrated a frequently used full-stack module using React.js and Java-SpringBoot.
- Enhanced internal Content Management System (CMS) frontend performance by over 100%.
- Developed a Python Slack Bot that streamlines the workflow, reducing daily routines by over 50%.
- Integrated auto-reminders for unresolved alerts into the Slack Bot, cutting resolution time by 40%.

Network Administration, Department of Computer Science, NTU

Taiwan

DNS Team Leader (DevOps)

Mar. 2021 - Jan. 2023

- Administered four primary DNS servers, storing more than 99% of the department's DNS records.
- Managed over 80% of the department's machines within the VMWare ESXI Cluster.
- Streamlined the DNS query log upload process with a Linux shell script, leveraging SFTP and Crontab.
- Established the first real-time DNS monitoring system with Grafana and Prometheus.

PROJECTS

Online Forum System | React.js, Express.js, GraphQL, MongoDB

Dec. 2022

A full-stack final project that earned A+ in NTU's EE3035: Web Programming course.

- Led the entire full-stack project, managing versions with git.
- Designed the website architecture and developed the Minimum-Viable-Product (MVP).
- Independently delivered the presentation through a pre-recorded video.
- GitHub Link: <https://github.com/tsai8890/Online-Forum-System>.

All2Dots | Python, GitHub Action

Aug. 2024

A command-line tool in Python that can convert any text or image to dot-based texts.

- Resolved image upload restrictions in most chatting applications and streaming platforms.
- Integrated GitHub Action to build a streamlined CI pipeline with PR-title checking.
- GitHub Link: <https://github.com/tsai8890/All2Dots>.

TEACHING EXPERIENCES

CSIE 2311: Network Administration and System Administration, NTU

Taiwan

Teaching Assistant

Mar. 2022 - June 2022

- Delivered a 45-minute lecture on DNS to 100+ students, receiving in-class positive feedback.
- Designed in-class lab exercises, introducing Bind9 DNS server construction.