

Wayne (Wei-En), Tsai

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EDUCATION

University of Washington

M.S. in Technology Innovation (Computer Science), College of Engineering. Sept. 2024 - Mar. 2026 (Expected)

National Tsing Hua University

M.S. in Information Security. GPA:4.2/4.3 (Withdrew to pursue graduate studies in the U.S.) Sept. 2021 - Jan. 2023

B.A. in Computer Science and Quantitative Finance. Last 60 GPA:3.86/4.3 Sept. 2017 - Jun. 2021

WORK EXPERIENCE

Dareesoft Seattle, WA

Jul. 2025 - Present

Software Engineering Intern

- Upgraded the hazards mapping platform by integrating **Deck.gl** GPU rendering to replace a legacy Google tooling stack, cutting render latency by 60%, lifting display limits, adding contextual navigation for rapid hazard review, and delivering a phased **MLOps** roadmap—with rollout priorities and ready-to-use configs—that aligns the AI team's stack for faster experimentation.

De.Vote Inc. Hsinchu, Taiwan

Aug. 2022 - Aug. 2024

Backend Engineer, Founder (Part-time, during MS studies)

- Architected a high-performance voting platform processing **500+ TPS** using **Ruby**, **Puma** multi-process workers, **Rack** middleware, and **Roda** APIs; containerized services and implemented CI/CD for scalable, reliable production operations.

Aisen Technology Co., Ltd. Hsinchu, Taiwan

Jul. 2019 - Aug. 2024

Full Stack Engineer, Founder (Part-time, during undergraduate studies)

- Developed a full-stack solution leveraging **WebGazer.js**, **React**, **Node.js**, **MongoDB**, and **AWS** for cloud infrastructure, reducing application costs by 99% using webcam+ML to replace dedicated eye-tracker.

Advantech Co., Ltd. Taipei, Taiwan

Jul. 2019 - Aug. 2019

Software Engineering Intern. (Awarded Best Intern)

- Built and deployed a vulnerability scanner web app (**Flask**, **MongoDB**) with **Kubernetes** and **Jenkins** CI/CD; delivered production launch on an industrial PaaS and remediated critical findings to harden security posture.

Cybersecurity Talent Incubation Program Ministry of Education, Taiwan

Oct. 2017 - Sep. 2021

Advanced Cybersecurity Mentorship Program Contestant (Top 1% National Cybersecurity Talent)

- Conducted research on **router vulnerability exploitation**, excelled in advanced **CTF** and industrial training.

PUBLICATION & PATENT

The ACM Symposium on User Interface Software and Technology(UIST)SF, US

Oct. 2023

Aisen - Web-Based Gaze-Tracking Assistive Communication Interface with Word Cards Generated by **LLMs**

The 33rd VLSI Design / CAD Symposium Taipei, Taiwan

Aug. 2022

iWalkSafe - Wearable Navigation Assistance for the Visually Impaired Based on **Miniatrized Edge AI**

Method and System for Proxy Voting Taiwan Intellectual Property Office

Sept. 2023

Primary Inventor of an efficient, user-centric and privacy-enhanced proxy voting method. ID: 112210061 (Granted)

SELECTED PROJECTS

AI Traffic Optimization for 5G Networks (sponsored by T-Mobile)

Sep. 2025 - Mar. 2026 (Expected)

- Researched and developed a **AI-powered traffic routing system** for 5G home routers to optimize network utilization, improve user experience, and maximize spectrum efficiency.

OTHER SKILLS

Programming Languages & DB: Python, Ruby, C/C++, JavaScript, Shell Script, Perl, MongoDB, Postgres

Frameworks: Roda, Ruby on Rails, Flask, React, React Native, Node.js, Bootstrap, Tailwind CSS

Tools & Platforms: Git, Docker, Kubernetes, Jenkins, Ansible, AWS, GCP, Azure, Heroku, Proxmox

Related Courses:

Software Studio (A+), The Attack and Defense of Computers (A+), Linux Operating System Kernel (A+), Network Security (A+), Service-Oriented Architecture (A+), Intro to Embedded System (A-), Intro to IoT (A-)