





Wei-En (Wayne), Tsai

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EDUCATION

University of Washington <i>M.S. in Technology Innovation (Focus: Computer Science), College of Engineering.</i>	Sept. 2024 - Present
National Tsing Hua University <i>M.S. in Information Security. GPA:4.2/4.3</i>	Sept. 2021 - Jan. 2023
National Tsing Hua University <i>B.A. in double specializations in Computer Science and Quantitative Finance. Last 60 Credits GPA:3.86/4.3</i>	Sept. 2017 - Jun. 2021

ENTREPRENEURSHIP & INDUSTRY EXPERIENCE

De.Vote Inc. <i>Backend Engineer, Founder and CEO (5-person student startup)</i> <ul style="list-style-type: none">Architected and implemented a secure voting system using Ruby with Puma as the web server, Rack as middleware, and Roda as the web framework, backed by PostgreSQL. Focused on ensuring user privacy and cryptographic data integrity, with our patented security measures.Achieved national top 20 startup ranking in Taiwan's 2022 FITI (From IP to IPO) program.	Aug. 2022 - Aug. 2024
Aisen Technology Co., Ltd. <i>Full Stack Engineer, Founder and CEO (2-person student startup)</i> <ul style="list-style-type: none">Developed a full-stack solution leveraging WebGazer.js, React, Node.js, MongoDB, and AWS for cloud infrastructure, reducing application costs by 99% through using webcam+ML to replace dedicated eye-tracker.Secured a 14,000 USD Grant from the Taiwan government in 2023 through delivering innovative technical solutions that addressed social welfare needs.	Jul. 2019 - Aug. 2024
Advantech Co., Ltd. <i>Software Engineering Intern. Awarded Best Intern.</i> <ul style="list-style-type: none">Developed a web app vulnerability scanner using Python Flask for the backend, MongoDB for data storage. Deployed on Kubernetes with CI/CD using Jenkins. Successfully launched on a marketplace.Identified and resolved critical security vulnerabilities, reducing potential data breach risk by 25%.	Jul. 2019 - Aug. 2019
Cybersecurity Talent Incubation Program <i>Ministry of Education</i> <i>Advanced Cybersecurity Mentorship Program Participant (Top 1% National Cybersecurity Talent)</i> <ul style="list-style-type: none">Conducted research on router vulnerability exploitation, excelled in advanced CTF and industrial training.	Oct. 2017 - Sep. 2021

PUBLICATION & PATENT

The ACM Symposium on User Interface Software and Technology (UIST)@SF,US <i>Aisen - Web-Based Gaze-Tracking Assistive Communication Interface with Word Cards Generated by LLMs</i>	Oct. 2023
The 33rd VLSI Design / CAD Symposium <i>iWalkSafe - Wearable Navigation Assistance for the Visually Impaired Based on Miniaturized Edge AI</i>	Aug. 2022
Method and System for Proxy Voting <i>Taiwan Intellectual Property Office</i> <i>Primary Inventor of an efficient, user-centric and privacy-enhanced proxy voting method. ID: 112210061 (Granted)</i>	Sept. 2023

SELECTED PROJECTS & AWARDS

idLab eID: Practical eID Solution for Schools and Enterprises <ul style="list-style-type: none">Single-handedly engineered a scalable eID system, utilizing a distributed architecture with Amazon SQS for message queuing and WebSocket for real-time updates. Awarded the innovation award ~\$5000 USD.
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OTHER SKILLS

Programming Languages: Python, Ruby, C/C++, JavaScript, Shell Script, Perl
Frameworks: Roda, Ruby on Rails, Flask, React, 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-)