# Yun Tung, Chu

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## Summary

Software engineer with hands-on experience building web and desktop applications across full-stack environments. Skilled in Python, Java, C#, and RESTful API development, with projects involving object-oriented design, cloud integration, and real-time system optimization. Comfortable collaborating in Agile teams and delivering functional software through rapid iteration.

## Education

**MS in Electrical and Computer Engineering**, University of Washington — Sep 2024 – Mar 2026
GPA: 3.86/4.0

- **Coursework:** AI For Mobile Robots, Large Language Models, Tiny-ML, AR/VR Application

**BS in Management Information System**, National Chengchi University — Sep 2020 – Jan 2024
GPA: 4.04/4.3

- **Coursework:** Data Structure, Algorithms, Operating System, Database Management System

## Technical Skills

**Languages:** Python, Java, JavaScript, PHP, HTML, SQL, C#, Object-oriented Programming
**Tools & Frameworks:** FastAPI, React, Git, GitHub, Docker, AWS, MySQL, MSSQL, REST APIs

## Work/Internship Experience

**AI/Software Engineering Intern — Innodisk Co.** — Jul 2022 – Aug 2022

- Expanded image dataset by 4.5 times using LabelImg and data augmentation techniques, improving model training efficiency.
- Optimized the YOLOv4-tiny model on Xilinx KV260 using Vitis-AI, achieving 95% mAP at 0.45 IoU in detecting screw welding defects, and improving inference speed by 50+ FPS.
- Containerized project using Docker on Linux to reduce environment-related issues during deployment.

**Backend Engineering Intern — Hualiteq International Co.** — Aug 2023 – Dec 2023

- Developed backend logic for an IVR system using JavaScript and MSSQL, and implemented dynamic voice response generation through Google TTS API integration, enabling real-time, personalized user interactions.
- Documented system integration workflows and GitLab CI practices for team-wide adoption.

## Projects

**A Cloud-Based Multimodal Data Ingestion Platform for Time Series, Cycling, and Open-Circuit Battery Data — Full-stack Developer (Industry Capstone)** — Jan 2025 – Jun 2025

- Architected a modular data processing pipeline (extract → clean → standardize → split) triggered via FastAPI endpoints and backed by S3-based datasets storage and PostgreSQL web data tracking.
- Implemented the frontend using React with dynamic routing and secure authentication via OAuth2 (Authlib), providing clients with isolated access to project-specific data.
- Designed and implemented comprehensive RESTful API architecture with 15+ endpoints handling multimodal data ingestion, user authentication, and real-time processing status tracking.
- Leveraged OpenAI's GPT API to intelligently match and standardize noisy or non-uniform column names across datasets, improving automation accuracy and reducing manual data mapping effort.

**Color Vision Deficiency Assistance Module — Software Developer** — Apr 2022 – Dec 2023

- Built object-oriented software modules in C# within the Unity environment to support color adjustment functions on Hololens2 mixed reality goggles, assisting users with color deficiency in specialized chemical lab settings.
- Implemented TensorFlow Object Detection API to identify laboratory glassware, achieving 94% mAP in object recognition.
- Built a partial frame color adjustment function using a custom color transformation matrix within the Unity development environment with C#.
- Optimized device integration through Socket programming and C# Coroutines, successfully reducing screen synchronization latency between edge device and local server by 100 ms.
- Secured First Place in the 2023 National Universities Innovation Competition. Github Repo: UnitywithOD

**Campus Navigator (Money Grabber) — Software Developer** — Feb 2021 – Jun 2021

- Developed a location-based restaurant discovery app using Java in Eclipse, applying object-oriented principles to build modular features including map navigation and user interaction logic.
- Built web scraping scripts in Python (Selenium, BeautifulSoup) to fetch restaurant data from Google Maps.
- Integrated Google Maps API for interactive geolocation and UI features to assist campus newcomers.