

# MAXYM (YU-CHIA) HUANG

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## EXPERIENCE

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### Field Application Engineer, Test Research Inc., TW

Feb 2025 — Present

- First line customer support for X-ray inspection products
- Leveraged supervised ML models to improve inspection accuracy, lowering defect escape and false call rate by 10%
- Developed x-ray inspection recipes for various defect detection, including HiP (head in pillow), void, bridging (short), etc.
- Developed debugging scripts to streamline troubleshooting processes
- Designed and built internal software tools for designed experiments that boosts productivity by 20%

**Technologies:** Image Processing, Signal Processing, Control Systems, Microcontrollers

### Product Manager, Brobridge, TW

Nov 2023 — Jan 2025

- Led NPI for the flagship product Gravity Portal.
- Designed specifications for distributed system application
- Introduced Scrum processes, developed comprehensive specifications, and enhancing team efficiency by 50%.
- Directed the NHI (National Health Insurance) Digital Transformation Project
- Collaborated with diverse stakeholders to ensure all deliverables met defined acceptance criteria.

**Technologies:** Kubernetes, Linux, Distributed Systems, Docker, SQL/NoSQL, Golang, JavaScript, Python

## EDUCATION

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### Purdue University

#### Industrial Engineering, Bachelors of Science

2019 — 2023

## PROJECTS

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### Self Hosted Homelab

Sep 2024 — Present

- Administered a linux server and responsible of maintaining, upgrading and hardening the system
- Self-hosted smart home applications (homeassistant) under a virtual machine deployment for various smart home controls
- Deployed a multi-functional media server on docker that supports viewing, downloading and looking up contents
- Hosted cloud share server that can be accessed anywhere
- Deployed a web server for a personal blog with nginx reverse proxy

### File Finder Pro Max

Mar 2025 — Present

- Built a file finder system using react.js and python
- Leverage faiss (facebook AI similarity search) to support semantic file lookup
- Integrate ollama api calls for local LLM AI summarization
- Docker deployment (WIP)

### Voice Activation Smart Home Controller

Nov 2024 — Present

- Designed a simple smart home controller that consists of a button, a I2S INMP445 microphone, a 1-inch I2C OLED screen and a esp32 microcontroller
- Utilize websocket implementation to overcome memory limitations during recording
- *Vibe coded* scripts for customized openai-whisper model training process
- Developed esp32 firmware that accepts voice input and make websocket api calls to the backend host
- Utilize home assistant apis to connect the controllers to other smart home objects (WIP)

## SKILLS

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- Code: C/C++, Python, shell scripts
- Tools: Docker, SQL, Linux, Kubernetes, Cursor