

# CHIAO-WEI HSU

📞 631-710-8463 📩 cwhsu.career@gmail.com 💬 chiao-wei-hsu 🌐 chiaoweihsu.com

## EDUCATION

### Stanford University (Auditing Courses)

*Digital Nomad at Startup House* ↗

Palo Alto, CA

Since Sep. 2024

- Parallel Computing, Big Data Systems, Computer Graphics and Vision.

### Northwestern University

GPA: 3.88/4.0

Evanston, IL

*Master of Science in Computer Science*

Since Sep. 2023

- Scalable Software Architecture, Decentralization & Blockchain, Operating Systems, Computer Networks, Programming Languages (Compiler/Interpreter/Garbage Collector).

- Project: “*Understanding User Challenges in Prototyping with Large Language Models*” supervised by Haoqi Zhang ↗.

## EXPERIENCE

### Software Engineer Intern

Irvine, CA

*Himax Imaging Corp.*

Jun. 2024 – Sep. 2024

- Developed a RESTful API for the AI PC by Django and Django REST framework with PostgreSQL.
- Integrated Websocket, Shared Memory, and Named Pipe for Inter-Process Communication among the microcontroller, the host PC, and the application.
- Developed a library to communicate with the microcontroller FT4222 driver.

### Software Engineer

Taiwan

*Academia Sinica*

Oct. 2018 – Dec. 2022

- Developed a Person-Company Profile Generation System with Django, MySQL Database, and typical Natural Language Processing pipelines.
- nlds ↗: Developed a python library of natural language data structure with Design Patterns—Composite, Factory, Template, Command, Facade, Adapter, Delegate, Builder, Strategy, Iterator, Dependency Injection, and Meta Class.
- Engineered a Knowledge-driven Multi-Modal QA System integrating vision, speech, and text data, advancing capabilities in cross-modal information processing.

## PROJECTS

### Decentralization and Blockhcains System ↗ VIDEO

Mar. 2024 – Jun. 2024

- Developed a P2P Network for the blockchain system using Rust.
- Implemented the data structures (e.g., Transaction, Block, Blockchain, Mempool) and algorithms for Gossiping Protocol and the Proof of Work consensus for the mining process.

### Interpreter by Racket/Lisp ↗ CODE

Jan. 2024 – Mar. 2024

- Built a parser, a compiler, and a garbage collector using Mark & Sweep and Two-Space Collection.
- Implemented features of deferred substitution, higher order functions, state, error handling, and recursions.

### AI-Driven Grocery Logging and Recipe Suggestions App ↗ DEMO

Sep. 2023 – Apr. 2024

- Adopted ReactJS, Vite, and Firebase; conducted tests using Cypress.
- Developed a Serverless RESTful API with ExpressJS as back-end deployed with AWS ElasticBean.
- Incorporated API Gateway with AWS Lambda Functions.
- Engineered prompts for GPT-4 Vision, deployed OCR to scan receipts, and implemented features to send expiry notifications and receipt suggestions.

### AI-Powered Driver Companion Mobile App ↗ DEMO

Mar. 2024 – Apr. 2024

- Incorporated AI models, YOLOv4, GPT-4, Text-To-Speech, Speech-To-Text, to streamline from image recognition to natural language processing.
- adopted Django as back-end, and React Native, Expo for mobile development.

## SKILLS AND KNOWLEDGE

**Other Programming Languages:** Java, Rust, PHP, Lisp/Racket, FORTRAN, SQL, SPARQL, LaTeX.

**WebDev/Database:** ReactJS, ExpressJS, Django, MongoDB, PostgreSQL, Redis, Firebase, WikiData, Neo4j.

## HONORS

↗ 3rd Place in the Taitung Mobile App Design Competition, 2015, for innovative app development.

↗ Silver Award at Global Startup Weekend 2015; Silver Award at Sanmen Startup Competition 2016; 2nd Place at PitchCamp for building an upcycling C2C/B2C platform and consultancy as a then-cofounder. The business has grown to 30 employees since 2016 and successfully raised 2 million US dollars in seed funding in 2025.

↗ Outstanding Social Youth of 2017 awarded by Chiayi City for exceptional community service and leadership.