

# Ryan Hsu

ryanh4w@gmail.com | +886-935-352-269 | [linkedin.com/in/ryan-tingwei-hsu/](https://www.linkedin.com/in/ryan-tingwei-hsu/)

## Education

### National Taiwan University

Sept. 2019 – Jan. 2023

B.S. in Computer Science and Information Engineering (CGPA: 3.98/4.3)

- **Graduate Coursework:** Web Programming, Fundamental Object Oriented Programming, Machine Learning, Natural Language Processing, Applied Deep Learning, Digital Image Processing, Introduction to Intelligent Vehicle, Introduction to FinTech.
- **Undergraduate Coursework:** Data Structures and Algorithms, Operation system, Computer Networks, Computer Architecture.

## Work Experience

### Management Information System Engineer

July 2023 - Present

Ta Fong Steel Corporation

- Manipulated and maintained the company's Enterprise Resource Planning (ERP) system.
- Collaborated with cross-functional teams to collect business requirements and translate them into technical solutions, leading to significant improvements in the user experience for a base of 40 individuals.

## Research Experience

### Instruction and Prompt Tuning on Dialogue Tasks

Python / Pytorch / DL / NLP

July 2022 - Jan. 2023

NTU Machine Intelligence Lab | Advisor: Prof. Yun-Nung (Vivian) Chen

- Conducted research on instruction and prompt tuning to improve 50 dialogue generation and classification tasks.
- Gathered data from various dialogue datasets and aligned it with diverse templates for each dataset.

### NFT Cross-chain Bridge

Python / Solidity / React.js

Feb. 2022 - Jan. 2023

NTU Image and Vision Lab | Advisor: Prof. Yi-Ping Hung

- Focused on NFT transfer on different block chains and developed a software application to facilitate the transfer of NFTs.
- Implemented basic configurations and conducted initial testing for Tezos and Ethereum.

## Projects

### Interactive Web Service of Food Review Forum

React.js / GraphQL / MongoDB

Fall 2021

- Spearheaded the development of a food review forum, leveraging React as the primary frontend framework and Node.js as the backend framework.
- Enhanced full-stack proficiency by developing responsive frontend and robust backend application, bolstering web service skill.
- Attained an impressive top-15 ranking among a competitive pool of 50+ groups in key web services metrics, which encompassed latency, integrity, and system complexity.

### TOMOFUN Sound Classification AI Competition

Python / Pytorch / AMAZON EC2 / Flask

Spring 2021

- Developed 10+ neural network models for the classification of diverse sounds into 11 distinct classes.
- Implemented data augmentation, time augmentation, and ensemble learning techniques to improve model performance.
- Successfully deployed the model to an AWS web service, enabling real-time inference generation.
- Distinguished as a finalist, ranking among the top 10 out of more than 300 participating teams.

### Side-Scrolling Battle Game

Java / OOP

Spring 2021

- Conceptualized and implemented a 2D side-scrolling game using Java, featuring a software design that prioritizes flexibility and adheres to the open-closed principle.
- Designed the program architecture structure and orchestrated the development process.

## Skills

**Programming Language:** C/C++, Python, Java, WebDev (HTML/CSS/JavaScript, GraphQL), Matlab, Verilog

**Language:** Mandarin (native), English (advanced), Japanese (intermediate)

**ML-related Skill:** PyTorch, Keras, Fine-tuned transformer model (HuggingFace), Deep Learning, NLP.

**Others:** Git/GitHub, Unix/Linux, Docker, shell.