

# Chun-Kai Yang (楊竣凱)

📍 Taipei, Taiwan   ✉ ken1130yang@gmail.com   ☎ +886 953 038 320   in Yang, Chun-Kai   📄 YCK1130

## Education

### National Taiwan University

Sep 2021 - now

Electrical Engineering B.S. (GPA: 4.16/4.3 or 3.95/4.0)

- **Course:** Reinforcement Learning, Machine Learning, Deep Learning in Computer Vision, Web Programming, Algorithm, Cryptography and Network Security

## Experience

### AI Engineering Intern

London, UK

Instill AI

Jun 2024 - Aug 2024

- Integrated the automation tool website with 3 vendors' API with 20+ functionalities in Golang.
- Developed a scalable and generalized unit test solution with a mock server for HTTP-related functions.
- Implemented a debugging logger to convert complex Go classes into readable formats.

### Head of IT Department

Sep 2023 - Jun 2024

NTUEE Student Association

- Led a team of 10+ members to develop and maintain web pages for department activities, including creating React-based mini-games that engaged 200+ participants.
- Maintained a website using a stable matching algorithm to efficiently allocate elective courses to 1,000+ students.
- Organized and conducted workshops on web design, Linux, and Git & GitHub basics, attracting 80+ attendees.

## Publications

### Diffusion Imitation from Observation

NeurIPS, 2024

Bo-Ruei Huang, **Chun-Kai Yang**, Chun-Mao Lai, Dai-Jie Wu, Shao-Hua Sun

We integrated diffusion models into adversarial imitation learning from observation, improving robustness and performance. DIFO outperforms SOTA methods in various continuous control domains.

## Selected Projects

### NTUEE Light Dance

Oct 2022 - Mar 2024

Member of Raspberry Pi (RPi) team

- Refactored a monolithic program into modular components, integrating them into a CLI tool.
- Developed efficient light control logic with parallel programming, increasing the frame rate performance by 2x.
- Redesigned the data frame storing method, reducing storage size by 30% compared to the previous JSON format.

[C++](#) | [Python](#) | [Parallel Programming](#) | [System Programming](#) | [Linux](#) | [RPi](#)

### Secure Communication app with IOTA identity check

Oct 2023 - Dec 2023

- Developed a decentralized identity verification workflow with the IOTA Tangle technique.
- Implemented a chat room web app with end-to-end encryption communication.

[Python](#) | [React](#) | [Cryptography](#) | [IOTA](#) | [RPi](#)

### Google 2023 Hardware Product Sprint - Fire Guardian

Jun 2023 - Aug 2023

- Integrated a smoke detector and escape indicator to create an intuitive escape system with Raspberry Pi.
- Developed dynamic real-time escape routing algorithm and web integration.
- Used MQTT for edge device communication and notified the user with Line Bot API.

[Python](#) | [NodeRED](#) | [Embedding System](#)

### MakeNTU equipment reservation website

Dec 2022 - Feb 2023

- Developed an equipment reservation website for Taiwan's largest student-maker hackathon.
- Used React, Express, and MongoDB for full-stack development.
- Utilized tools like Docker, Nginx, and Cloudflare to deploy webpages and servers for a wide audience.

[React](#) | [JavaScript](#) | [MongoDB](#) | [Docker](#) | [Nginx](#)

## Tech Skills

C++, Python, Go, TypeScript, React, Pytorch, git, Docker, RPi, Arduino