# Jie-Ying (Jay) Lee

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# EDUCATION

National Yang Ming Chiao Tung University

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B.S. in Computer Science; GPA: 4.23/4.3 (Overall), 4.26/4.3 (Major)

Jul. 2021 - Present

Courses: DS and OOP, Introduction to A.I., Introduction to ML, Introduction to Image Processing, Competitive Programming I, Theory of Computer Games, Probability, Introduction to Algorithm, Introduction to Database System, System and Network Administration

### Experiences

IT Center of Department of Computer Science, NYCU Linux, Kubernetes, PHP, Laravel, Vue, CI/CD, GitLab flow Teaching Assistant of WWW and System Group July 2022 - Present

Developed the backend of teaching assistant contact information system using PHP and Laravel. And learned how to design the database schema and write RESTful API, also used OpenAPI to write API document. Also Understood the process of software development, including git version control, merge requests and CI/CD.

Microsoft .NET Framework, jQuery

Research & Development Intern at Bing Geocoding

Sep. 2023 - Present

Refined the dashboard used by engineers and scientists for evaluated the performance.

MongoDB, Trino, Argo Workflow, Kubernetes, GCP, BigQuery, Looker Studio, System Design Appier

Jul. 2023 - Sep. 2023

Developed a novel system to visualize the cloud service cost of each customer on each feature. Used Google Cloud Storage and Looker Studio for visualization. Tested and deployed to production environment.

CompPhoto Lab

Python, NeRF, 3D Generative AI, Scene Generation

Research Assistant

Backend Engineer Summer Intern

Aug. 2023 - Present

Advised by Prof. Yu-Lun Liu. Conducting a research using NeRF to generate 3D unbounded scene generation.

#### Projects

- Camp Management System (Vue.js, Nuxt.js, Vuetify.js, PostgreSQL, Python, Django): inal project of introduction to database system. Designed to manage applicant data and support multiple reviewers in evaluating applicant information and assigning scores. Using Nuxt and Vuetify to create a modern-look frontend. Also used Django as backend to create a RESTful API server. Link (Jan. 2023)
- C++ Implementation of Root-parallelization MCTS (C++, MCTS, AI, Parallel Programming): Project of theory of computer games. Implemented a root-parallelization multi-thread MCTS algorithm for NoGo game. It can be also applied in various of games, like Go, Hex, etc. Link (Jan. 2023)
- Accounting TGBot (Python, Firebase, CI/CD, Heroku): An accounting bot that allows users to record expenses via the Telegram application. Used Firebase as database for instant syncing and fast deployment. Link (Jun. 2022)
- VAE-pix2pix-terrain-generator (Python, PyTorch, GAN, Unity, Web Development): Used NASA's SRTM 1 Arc-Second dataset to collect altitude maps and MapTiler to collect corresponding satellite images from around the world. The collected images are used to train a VAE-pix2pix model, which is an VAE combined with pix2pix. The model adds realistic details to the heightmap and generates corresponding satellite images. Link (Jul. 2020)
- UbikeAnywhereBot (Python, API, Crawler): A Telegram Bot for Ubike route planning. The Bot first asks the user for their starting point and destination, and uses the PTX API provided by the government to obtain the names, coordinates, available bikes, and available spaces of all Ubike stations in Taiwan. Link (Jul. 2019)

#### Awards

- Marconix Award of 19th Marconix Science Award: Top award in Marconix Science Award. The only recipient within 6 years.
- Second Place in 60th National Primary and High School Science Fair: Awarded the best work at the 60th national science fair (The first place is absent) out of 8 all participants who are the first place from cities in Taiwan.
- Bronze Award of The 2022 ICPC Asia Taoyuan Regional Programming Contest: Thirty-second place out of 100 teams. Second place of the bronze award.
- Academic Achievements Award in 2021 Fall Semester: Top 5 % in the class.
- Fundamental Course Award of Discrete Mathematics, Digital Circuit Design, Data Structures & Object-oriented Programming and Introduction to Algorithms: Top 5% of these courses.

## Extracurricular Activities

## NYCU CS Student Union Association

Co-leader of Information Group Jul. 2023 - Present Led 3 members to maintain the service provided by CS Union, including past exam system, introduction of CS department for high school and several web services.