

# Jie-Ying (Jay) Lee

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## EDUCATION

- National Yang Ming Chiao Tung University** Hsinchu, Taiwan  
*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

- Microsoft** .NET Framework, jQuery  
*Research & Development Intern at Bing Geocoding* Sep. 2023 - Present  
Integrated code in backend component, made it able to populate new data format and displayed the them in dashboard. Also refined the dashboard to make it more useful for engineers and scientists.
- IT Center of Department of Computer Science, NYCU** Linux, Kubernetes, PHP, Laravel, Vue, CI/CD, GitLab flow  
*Teaching Assistant of WWW and System Group* Jul. 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 be familiar with the process of software development, including git version control, merge requests and CI/CD.
- CompPhoto Lab** Python, NeRF, 3D Generative AI, Scene Generation  
*Research Assistant* Aug. 2023 - Present  
Advised by Prof. Yu-Lun Liu. Conducting a research using NeRF to generate 3D unbounded scene generation.
- Appier** MongoDB, Trino, Argo Workflow, Kubernetes, GCP, BigQuery, Looker Studio, Agile, System Design  
*Backend Engineer Summer Intern* Jul. 2023 - Sep. 2023  
Developed a novel system to calculate and visualize the cloud service costs for each customer per feature. Utilized Google Cloud Storage and Looker Studio for visualization. Tested and deployed the system in a production environment. Developed in collaboration with the team's Scrum process. Also engaged with Product Managers and sales teams to ensure the system meets their expectations.

## PROJECTS

- Camp Management System (Vue.js, Nuxt.js, Vuetify.js, PostgreSQL, Python, Django)**: The final project for the introduction to database system course. Designed to manage applicant data and support multiple reviewers in evaluating applicant information and assigning scores. Using Nuxt and Vuetify to create a modern-looking frontend. Also used Django as the backend to create a RESTful API server. [Link](#) (Jan. 2023)
- C++ Implementation of Root-parallelization MCTS (C++, MCTS, AI, Parallel Programming)**: Project for 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)
- AccountingTGBot (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 10 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 Taoyaun Association**  
*President* Jul. 2022 - Jul. 2023  
Led 60 members from various of departments in NYCU to organized welcoming camp, campus tour for over 50 students from Taoyaun, Yunlin and Chiayi. By engaging in activity preparation, I acquired the skills to effectively communicate and collaborate with individuals from diverse backgrounds.
- SITCON 2022 Agenda Committee**  
*Member* Mar. 2022 - Sep. 2022  
Organized events and review agendas at SITCON (the largest student information conference in East Asia), also responsible for organizing the forum that delved into the issues of information education in Taiwan.