

Tsung-Yen (Yen) Lee | 李宗諺

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EDUCATION

National Yang Ming Chiao Tung University (NYCU)

Hsinchu, Taiwan

B.S. in Computer Science, Overall GPA: 4.11/4.30, CS-Related GPA: 4.19/4.30

Sep 2022 – Aug 2026 (Projected)

Selected Courses (click to see syllabus): [Intro. to Artificial Intelligence](#), [Intro. to Machine Learning](#), [Selected Topics in Visual Recognition using Deep Learning](#), [Intro. to Image Processing](#), [Intro. to Computer Graphics](#), [Computer Animations and Special Effects](#), [Multimedia and Human Computer Interaction Capstone](#), [Probability](#), [Algorithms](#), [Computer System Administration](#), ...

Achieved 1st out of 192 (2024 Fall, 2025 Spring)

The University of Osaka (UOsaka)

Osaka, Japan

FrontierLab Exchange Student in Graduate School of Information Science and Technology

Oct 2025 – Aug 2026 (Projected)

Working as a full-time research assistant under the exchange program.

Selected Courses: Machine Vision, Computational Photography.

EXPERIENCE

Undergraduate Research Assistant

Mar 2023 – Present

NYCU Computational Photography Lab ([homepage](#))

Hsinchu, Taiwan

- Conducting research under Prof. Yu-Lun Liu's supervision on 3D scene reconstruction and editing.
- Currently developing Appearance Harmonization in 3D scene with 3D Gaussian Splatting (3DGS).

Research Assistant

Oct. 2025 – Present

Intelligence and Sensing Lab. (ISLab; 長原研究室), UOsaka ([homepage](#))

Osaka, Japan

- Working as a full-time research assistant in ISLab under Prof. Hajime Nagahara's supervision.
- Currently working on Task-Oriented Camera Parameter Optimization.

EXTRACURRICULAR ACTIVITIES

Head Instructor

Jun 2023 – Jun 2024

NYCU Coffee Club

Hsinchu, Taiwan

- Delivered lectures and ensured the theoretical accuracy of content presented by colleagues.
- Designed and developed training program to improve club members' coffee skills.

Director

Jun 2020 – Jun 2021

Computer Software Development Club (CSDC), Hsinchu High School

Hsinchu, Taiwan

- Designed and conducted a year-long C++ and basic algorithms lectures.
- Co-organized a joint winter training camp with 12 clubs of 10 schools, co-organized a joint club orientation with 2 clubs of nearby schools.
- Enriched the problemset of the club and held 5 contests.

PROJECTS

Gaussians Harmonizer: Recolorization for Consistent Appearance in Composite 3D Gaussian Splatting Scene

NYCU CS Undergraduate Research Project Competition 2025 - **Runner-Up**

Python, PyTorch

- We propose Gaussians Harmonizer, a novel appearance harmonization framework for 3D Gaussian Splatting (3DGS) to achieve consistent appearance in composite 3DGS scenes.
- Gaussians Harmonizer iteratively optimizes the color of foreground 3D Gaussians in the composite scene with a pre-trained 2D harmonization network.

PointAnything: Pointing Estimation from single RGB image

[GitHub repo link](#)

NYCU AI Workshop 2024 - **Best Project Award**

Python, PyTorch, OpenCV

- We developed a zero-shot hand-pointing object-detecting system to identify the object being pointed at in an image.
- PointAnything predicts the pointing direction with human skeleton estimator, and then detects the object in the predicted direction with object detector and monocular depth estimator. We also designed a heuristic algorithm to combine the results of these three models.

- I proposed the task, the solution and contributed the primary implementation.

Tab Finder Browser Extension

[GitHub repo link](#)

Multimedia and Human Computer Interaction Capstone Final Project

Javascript, OpenAI API, HTML, CSS

- We implemented a browser extension that leverages LLM to organize and find the tabs.
- TabFinder automatically retrieves the tabs' info and utilizes OpenAI API to summarize the tabs. With the abstraction, TabFinder is capable of searching for tabs with keywords.
- I led the project, refined the initial task, proposed the solution and contributed the implementation.

Python Fluid Dynamics Simulation

[GitHub repo link](#)

Computer Animations and Special Effects Final Project

Python, OpenCV

- We implemented a fluid-simulating algorithm proposed in the paper "Real-Time Fluid Dynamics for Games" by Jos Stam.

AWARDS & ACHIEVEMENTS

Runner-Up of NYCU CS Undergraduate Research Project Competition 2025

Department of Computer Science, NYCU

Project: "Gaussians Harmonizer: Recolorization for Consistent Appearance in Composite 3D Gaussian Splatting Scene"

2024 NYCU AI Workshop Best Project Award

Department of Computer Science, NYCU

Project: "PointAnything: Pointing Estimation from single RGB image"

LANGUAGE SKILLS

Chinese: Native

English: TOEFL iBT 93/120 (R27 L25 S20 W21)

Japanese: JLPT N1: Passed

TECHNICAL SKILLS

Programming Languages: C/C++, Python, Shell Script, MATLAB, SQL, Javascript, HTML

Tools: PyTorch, OpenCV, Linux, \LaTeX , Coffee Drippers, Syphon and Roasting Machine (I love coffee!)