

Alan Shu-Luen Chang

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EDUCATION

National Taiwan University (NTU)

B.S. in Civil Engineering and Interdisciplinary Studies

Taipei, Taiwan | Sep. 2022 - Present

- Areas of Interdisciplinary Studies: *Sports Data Analytics and Data Science*
- Generally considered the best university in Taiwan.
- Relevant Courses: Computer Programming (Python), Programming Design (C++), Data Structure, Algorithms, Machine Learning, Deep Learning in Computer Vision, Database Management Systems
- Cumulative GPA: 3.62/4.3

Taipei Municipal Chien Kuo Senior High School

Taipei, Taiwan | Sep. 2019 – June. 2022

- One of the best high schools in Taiwan.

PUBLICATIONS

1. Alan Shu-Luen Chang, “Real-Time Intentional Eye Blink Detection Using Rhombus Identification”, *New Trends in Computer Technologies and Applications. Communications in Computer and Information Science, Hsieh, SY., Hung, LJ., Klasing, R., Lee, CW., Peng, SL. (eds), Vol. 1723*. Springer, Singapore, 2023. https://doi.org/10.1007/978-981-19-9582-8_26
 - Presented in English at the 2022 International Computer Symposium, Taiwan.
 - Invited to publish in the book above.
 - Currently have 3 citations on Google Scholar.
2. Alan Shu-Luen Chang, “Real-Time Intentional Eye Blink Detection Using Rhombus Identification,” in *Proceedings of International Computer Symposium*, Taoyuan, Taiwan, December 2022.

PROJECTS

Maze Solving Game

Dec. 2024

Final Project in Programming Design (C++)

- A food-themed maze solving game that randomly generates mazes using the DFS algorithm for the player to solve.

Analyzing the St. Louis Cardinals' Pitching Staff and Strategies for the 2024 Season

Aug. 2023

Taiwan Baseball Data Analytics Competition

- Formed a 4-person team to participate in this competition. Analyzed player statistics and formulated a team-building strategy for the St. Louis Cardinals.

Baseball: The Impact of Drag Coefficients

Jun. 2023

Final Project in Computer Programming (Python)

- Studied and visualized the relationship between baseball's coefficients of restitution in Major League Baseball and their flight distances using the Pybaseball library on Python.

Customized Facial Expression Recognition for Home Security Systems

Mar. 2021

Chien Kuo Senior High School Science Fair

- Awarded First Prize of the “*Computer and Information Science*” category that year; the top award in the year.
- Developed a new way of detecting eye blinking and specifically one-eyed blinking, using machine learning in the process.
- Polished and translated into my paper “Real-Time Intentional Eye Blink Detection Using Rhombus Identification” published in the 2021 International Computer Symposium and then invited to be a book chapter in *New Trends in Computer Technologies and Applications. Communications in Computer and Information Science*, Springer, Singapore in 2023.

Power Saving Light Control System

Jan. 2021

Final Project for Science and Technology Class in High School

- Developed a simple light control system using Arduino that detects whether someone is moving closer to or away from the light source and turns an LED light on or off according to the detection.

Smart Home System Concept

Jul. 2020 – Nov. 2020

Future Stars – Smart Technology Camp

- Selected among 35 people out of 120 to participate in this camp hosted by the NTU Department of Electrical Engineering, the MediaTek Foundation, and National Taiwan Science Education Center.
- Presented a smart home system concept at the end of the camp and was awarded a NT \$20,000 training scholarship with a professor from the Department of Electrical Engineering at NTU as my mentor; only 57% of the participants were awarded.
- Later developed into the “Customized Facial Expression Recognition for Home Security Systems” project above, and ultimately developed into my papers listed in **Publications**

SKILLS

Languages: English (Fluent), Mandarin (Native), Spanish (Elementary)

- **English Language Performance:**
 - TOEFL: 103/120 (Jun. 2018)
 - TOEIC: 980/990 (Jan. 2021)
 - Exempted from all required English language courses in college.
 - Taken seven EMI (English Medium Instruction) courses in total in college.
 - First prize in the CGE National English Writing Competition, Taiwan
 - Exempted from English language courses during first year of high school.

Technical Skills: Python (Pandas, OpenCV, PyTorch, etc), C++, Arduino

EXTRACURRICULAR ACTIVITIES

Department of Civil Engineering Baseball Team – Captain and Player

Sep. 2022 – Present

- Active member of the team and became captain in June of 2024.

NTU Cook and Taste Club – Instructor Feb. 2024 – Present

- Active member of the club and became a cooking instructor in September of 2024.

NTU International Student Volunteer Dec. 2023 – June. 2024

- Help international exchange students with their transition to NTU and Taiwan.

Chien Kuo High School Baseball Team – Social Media Manager, Player Sep. 2019 – June. 2022

- Active member of the team and became the Social Media Manager in September 2020.