

# YU-HAN SUN

Taipei, Hsinchu

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## Education

### National Yang Ming Chiao Tung University

Sep. 2020 – Jun. 2024

*B.E. Industrial Engineering and Management*

*Hsinchu, Taiwan*

GPA: 4.17/4.3 ; Ranking: 2/72 ; the Dean's List Award

**Relevant Coursework:** Data Structures, Algorithm, Artificial Intelligence, Database System, Operating System, Network Programming, Statistics, Operation Research, Genetic Algorithm and Applications, Simulation

## Projects

### Face Detection using Supervised and Unsupervised Learning | *Python, OpenCV*

Feb. 2024 - Mar. 2024

- Built custom datasets and employed Viola-Jones, YOLOv8, and K-means clustering to train models for face detection.
- Implemented supervised and unsupervised learning to compare and analyze their performance in face detection tasks.
- Utilized Python libraries such as OpenCV for computer vision tasks, Ultralytics for YOLOv8 implementation, and Scikit-learn for K-means clustering.

### BattleSheep Game AI using Minimax and MCTS Algorithms | *C++*

Mar. 2024 - Apr. 2024

- Designed and developed AI players for BattleSheep game using Minimax and Monte Carlo Tree Search (MCTS) algorithms.
- Implemented game logic and AI algorithms from scratch using C++, focusing on optimal move selection and strategy.
- Conducted extensive testing and fine-tuned the AI's performance by adjusting algorithm parameters and heuristics.

### Blockchain Application for Supply Chain Simulation | *React, Node.js, Express, MySQL*

Feb. 2023 - Mar. 2024

- Developed a React interface for interaction with blockchain, integrating an Arduino RFID module to automate state transitions.
- Deployed a simulated blockchain network using Truffle and Ganache, and utilized Web3.js to interact with smart contract.
- Implemented a login system with Express, establishing connection to MySQL for storing and verifying user credentials.

### Online MUD Map Game with Integrated Chat | *C++(SFML), MySQL*

Dec. 2023 - Jan. 2024

- Utilized socket programming for TCP-based client-server communication, using Simple and Fast Multimedia Library (SFML) for GUI and game development with over 2k lines code.
- Implemented a real-time, multiplayer game environment, featuring live tracking of player locations and chatting system for player interaction.
- Utilized MySQL for backend data storage, managing login credentials and maintaining a ranking record for players.

## Technical Skills

**Languages:** C/C++, Python, JavaScript, SQL, Solidity

**Frameworks/Libraries:** PyTorch, OpenCV, Scikit-learn, React, Express, Remix

**Development Tools:** Git, Node.js, Visual Studio Code

## Experience

### Syntec Technology

Jun 2023 – Nov 2023

*Industrial Engineering Intern*

*Hsinchu, Taiwan*

- Utilized SQL to extract and analyze departmental work data, maintaining dashboards to visualize performance.
- Collaborated with departments to identify for implementing data-driven solutions, optimizing workflow.
- Automated tasks using Robotic Process Automation and developed VBA tools, reducing routine work hours by 7%.

## Leadership

### NYCU Student Career Institute - Open House

Oct 2020 – Present

*Coordinator*

*Hsinchu, Taiwan*

- Coordinated 6 career fairs for 4 years, each attracting over 10k students, and demonstrated digital transformation by organizing and transitioning career fair event to online platform.
- Led 3 departments with over 40 members, serving as a pivotal liaison communicating with the NYCU Career Development Center.
- Organized annual innovative events to assist students in exploring career paths and fostering connections with industry-leading companies.

### Atona Case Competition (ATCC) Final Rounds in Preliminary

Mar. 2022 – Apr. 2022

*Team member of "Gong Mei Swag"*

*Taipei, Taiwan*

- Spearheaded a project for the Teacher Chang Foundation, enhancing public awareness of youth mental health, ranking **top 20 nationally** in ATCC.
- Developed a series of podcasts and created Instagram effects, achieving over 7k uses.