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Bard (Yu-Chen) Pai

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EDUCATION

National Yang Ming Chiao Tung University

09 2024 - Present

Master of Data Science and Engineering

Hsinchu City, Taiwan

National Chung Cheng University

 $09\ 2020-01\ 2024$

Bachelor of Science in Communication Engineering - GPA - 3.99/4.3

Chiayi City, Taiwan

• 3 Presidential Honor Award

WORK EXPERIENCE

Synology 🔀 01 2024 – 04 2024

Backend Engineer Intern

New Taipei City, Taiwan

• Developed 10+ camera APIs for the NAS surveillance system (20,000,000+ downloads) to enhance control features in C++

National Academia Sinica

 $07\ 2023 - 08\ 2023$

Researcher Intern

Taipei City, Taiwan

- Computer Olympiad Gomoku 4th
- Boosted AlphaGo's win rate to 99% by integrating threat-space search and KataGo

AWARDS

Competitive Programming Contest | Skills: Data Structure and Algorithms

- ICPC 2021 Asia Taipei Regional Site Bronze Award
 - * Won a coding competition with 300+ participants, organized by NTUB
- Collegiate Programming Examination
 - * Accomplished a 6/7 problem solution rate, ranking 24th out of 2300+ participants.

Deep Learning Contest | Skills: Machine learning

- AI CUP for Orchid Species Identification and Classification Competition
 - * Achieved 70% accuracy rate by PyTorch
 - * Outperformed 90% teams in class, organized by Ministry of Education

PROJECTS

Enhancing BBR Algorithm in Coexistence with CUBIC | Skills: Networks

• Devised BBR-S, a novel algorithm for detecting BBR presence, ensuring improved fairness using scaled squared difference approach (1/900) by C++

Physics Simulation Experiments Website | Skills: Frontend

- Designed a website to display physics experiments by HTML, CSS and JavaScript
- Used by 300+ students yearly

Infrared Transmission with Hamming code | Skills: Embedded system

• Achieved 100% accuracy for transmitting 10K+ characters/s within planned time by C, MCU

TECHNICAL SKILLS

Languages: Python, C, C++, JavaScript, HTML, CSS

Developer Tools: VS Code, Google Colab

Technologies/Frameworks: Linux, Git, PyTorch, Docker

COURSEWORK

- Data Structures (A+) & Algorithms
- Operating Systems (A)
- Probability (A+)
- Microprocessor (A+)
- Computer Networks (A)