

OBJECTIVE STATEMENT

To secure a challenging role that allows me to apply my knowledge, continuously learn new skills, and develop innovative solutions by integrating insights from diverse fields. Passionate about collaborating within a team to make meaningful contributions and drive impactful outcomes.

EDUCATION

National Yang Ming Chiao Tung University

Hsinchu City, Taiwan

M.S. in Communication Engineering, GPA: 3.86/4.3

Sep 2022 – Dec 2024

- **Thesis:** An active approach for piecewise stationary restless bandit problem
- **Advisor:** Professor Yu-Chih Huang
- **Concentrations:** Machine Learning & Change Detection

National Taipei University

New Taipei City, Taiwan

B.S. in Communication Engineering, GPA: 3.76/4.0

Sep 2018 – Jun 2022

- **Concentrations:** Signal Processing & Communication System

PROJECTS

Water Segmentation Project

Jan. 2024

- Pre-processed image datasets to enhance training accuracy using techniques such as homomorphic filtering and mean shift segmentation for edge detection.
- Implemented and trained the UResNet152 model for effective water segmentation, achieving improved performance metrics on the dataset.

Conventional Image Processes (🔗)

Sept. 2023 – Jan. 2024

- Developed Python-based implementations for a variety of conventional image processing techniques.
- Tasks included Chromatic Enhancement, Image Flip, Image Resolution, Image Scaling, Luminosity Enhancement, and Sharpness Enhancement.

JPEG Compression Project (🔗)

July 2021 – Feb. 2022

- Built a C-based JPEG compression program using techniques such as DCT, quantization, zigzag, and Huffman coding, color field transform.

Dijkstra's Algorithm Implementation

Sept. 2020 – Jan. 2021

- Implemented Dijkstra's algorithm in C to calculate the shortest paths in simulated networks under Linux system.

ACHIEVEMENTS

Undergraduate Research Fellowship

Ministry of Science and Technology (MOST), Taiwan

July 2021 – Feb. 2022

- **Advisor:** Professor Yu-Pin Hsu
- Modeled the wireless communication network as a multi-armed bandit problem to optimize decision-making under uncertainty.
- Analyzed the implications of adversarial bandits arising from malicious attacks and their impact on network performance.
- Explored the integration of additional information, such as confidence levels, into the EXP3 algorithm to enhance the traditional adversarial bandit approach.

COURSEWORK

- **Graduate-Level:**

Computer Architecture, Wireless Communication & Signal Processing, Optimization Theory & Application, Digital Signal Processing, Image Processing, Deep Learning, Random Processes

- **Undergraduate-Level:**

Communication Theory, Queueing Theory, Machine Learning, Multimedia Signal Processing, Information Theory, Coding Theory, Computer Network, Detection & Estimation, Data Structure, Discrete Mathematics, Numerical Analysis

EXTRACURRICULAR ACTIVITIES

- **Work and Travel Program**, Yellowstone National Park, USA
- **Vice President**, Student Association of Communication Engineering Department
- **Academic Exchange Program**, Shanghai Jiao Tong University
- **Summer Leadership Program**, Czech University of Life Sciences

SKILLS

Programming Languages: Python, C, MATLAB

Technical Proficiencies: Digital Signal Processing, Machine Learning, Wireless Communication

Languages: Mandarin (Native), English (Intermediate)