Cheng-Yang (Eric) Chou 周呈陽

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Education

National Cheng Kung University, M.S. in Computer and Communication Engineering 09/2023 - 06/2025
- Advisor : Prof. Wenson Chang (張志文), Wireless Communication and Network Lab
- Thesis : "Maximizing Tasks Offloading and Local Computing for the Multi-UAV-Enabled MEC system".

National Cheng Kung University, B.S. in Systems and Naval Mechatronic Engineering 09/2019 - 06/2023
- Awards : four scholarships and the only undergraduate who graduated with a Graduation Scholarship.

Work Experience

TMYTEK - SWE intern 02/2025 - current
- Developed a C++ ROS2-based system monitoring and fault recovery system, improving system reliability by detecting and responding to failures in real-time.
- Implemented multi-threading (pthread), process management, and automated fault detection with GPIO alerts to enable seamless node recovery and reduce system down-time.

Realtek - Firmware Intern 07/2024 - 08/2024
- Enhanced USB file system compatibility by enabling support for reading files from both the root directory and first-level subdirectories on *FAT32* and *exFAT* in **C programming language**.
- **Prevented data corruption** by modifying End Of Chain (EOC) detection in FAT32.
- **Prevented incorrect file truncation** by refining the last sector calculations.

Open-Source Contribution

sysprog21/lab0-c (450★, 1.6k forks) [pr & issue / co-authored]
A **Linux-style C system programming** project that also serves as **course material** for Linux Kernel Internals at NCKU CSIE.
- Ranked among the **top 3 contributors** out of 73.
- Fixed console hang and prevented memory leaks, improved user feedback, and ensured proper footer sorting.

jserv/ttt (36★, 32 forks) [pr]
A tiny, terminal-based **Tic-Tac-Toe game implemented in C with AI opponent** using the minimax algorithm.
- Implemented input validation to reject invalid console inputs and fixed memory leaks.

wisdompeak/LeetCode (5.9k★, 1.3k forks) [pr]
This repository contains **C++/Python** solutions to medium+ LeetCode problems, with explanations.
- Debugging and refining solutions for LeetCode explanations in **C++**.

Relevant Courses

- EE : DSP, ASP, Digital Comm., Comm. Network, Wireless Comm., Convex Opt.
- CS : DS, Algo, OOP, *OS(self-learning), Linux Kernel Internals

Skills

C programming, C++, Linux Kernel API, File System(exFAT/FAT32), ROS2

Projects

Linux Kernel Linked List Implementation [Notes] *still in progress*
- **Skills** : C programming, Linux Kernel API, Valgrind, Perf, Git
- This project aims to deeply explore the implementation mechanisms of Linux kernel linked lists. By working with internal data structures, it provides hands-on experience with the Linux Kernel API, enhancing understanding of low-level memory management, and pointer manipulation.

Designing and manufacturing of intellectually unmanned ship
- **Skills** : C programming, Python, Raspberry Pi, and Arduino.
- Designing an unmanned ship capable of real-time image recognition and sound localization using Raspberry Pi, with Arduino handling system integration, while addressing challenges such as environmental noise, camera instability, and signal delays.

Awards & Extracurricular Activities

TOEIC Gold certificate 880 (L475, R405)	05/2024
112 學年第二學期大專院校優秀資通訊人才獎學金 (link)	2024
FitTech Graduation Scholarship (link)	2023
Higher Education Sprout Project Scholarship	2021
NTNU Entrepreneurship Competition Excellent Work	2021
Young Entrepreneurs of the Future Program at Epoch School (Kidnenjoy)	02/2021 - 07/2021
General convener of the orientation camp (迎新宿營總召)	09/2020 - 09/2021