Cheng-Yeh (Ken) Chung

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Education

National Taiwan University (NTU) — *Taipei, Taiwan*
B.S. in Electrical Engineering with a minor in Computer Science and Information Engineering — *Sep 2020 – Aug 2024*
- Dean's List Award (2021) | Recent year GPA: 3.97 / 4.3
- TA of Introduction to Generative AI 2024 Spring (EE5200)
- Relevant Courses: Computer Programming, Cornerstone EECS Design and Implementation, Web Programming, Data Structures and Algorithms, Systems Programming, Computer Architecture, Computer Networks, Operating System, Machine Learning

Skills

Programming Languages	Python, C/C++, C#, JavaScript, Solidity, Bash
Web & Data Management	HTML, React, Nodejs, Web3, GraphQL, Flask, MongoDB, MySQL, Vector Database
Development Tools & DevOps	Git, CI/CD Pipelines, Linux, Testing Flow, Pipeline Automation

Professional Experiences

TANGI0 LTD — *London, UK*
Firmware Engineer Intern | C, Python, Arduino, STM32, ESP32 — *Jun 2024 – Sep 2024*
- Developed firmware for ESP32 to map sensor signals to force values, enhancing system performance through real-time data analysis
- Built and integrated a company-wide library for a capacitive sensing chip, enabling system dynamic adjustment
- Worked on IQS chip firmware development, implementing I2C and real-time monitoring through UART to Signal Viewer

CMoney Financial Information Technology. Co., Ltd — *New Taipei, Taiwan*
Backend (Database) Engineer Intern | C#, CI/CD, Unit Test, Asynchronous Programming, SQL, OOP — *Jan 2023 – Jun 2023*
- Developed backend APIs and implemented a CI/CD pipeline using GitLab CI and Docker for a recruitment platform, automating data collection, storage, email notifications, testing, and deployment
- Created automated test suites for an Android app,enabling faster debugging for the engineering team

Research Experiences

Delta Research and NTUEE Speech Processing and Machine Learning Lab — *Taipei, Taiwan*
Undergraduate Researcher | Generative AI, LoRA, LLaMA2, PyTorch, Python — *Sep 2023 – Present*
- Conducting research on GenAI as part of a collaboration between Delta Research and NTUEE, supervised by Prof. Hung-Yi Lee
- Developed and optimized a fine-tuning pipeline for LLaMA2 using LoRA, improving model performance in specific language tasks
- Built a comprehensive model merging pipeline, integrating multiple pre-trained models to enhance generative capabilities

Project Experiences

Heart-Rate and Blood Pressure Variability Analysis Software — *Taipei, Taiwan*
Python Developer | Python, Signal Processing, Data Analysis — *Sep 2022 – Jan 2023*
- Developed software as part of a cross-domain collaboration between NTUEE and NTU Hospital
- Implemented real-time signal processing algorithms on electrocardiographic and blood pressure data, enhancing the accuracy of patient monitoring during cryoablation therapy

Metaverse Real Estate Transaction System — *Taipei, Taiwan*
Backend Developer | JavaScript, Nodejs, Python, Flask, Git, Unit Test, Document, Solidity, Web3, Ganache — *Dec 2023*
- Designed and developed backend services, including APIs, database integration, and blockchain testing using Ganache.
- Enabled Solidity smart contract compilation, deployment, and interaction with JavaScript for decentralized real estate transactions

Extracurricular & Leadership

NTUEE Light Dance — *Taipei, Taiwan*
⊙ NTUEE Light Dance GitHub | ▶ 2022 NTUEE Light Dance | ▶ 2023 NTUEE Light Dance — *Dec 2021 – Mar 2023*
Firmware Leader | Testing Flow, Pipeline Production, Communication Skills, Feasibility Assessment
- Led 10-member team responsible for developing the real-time firmware system, designing testing flow and pipeline production flow
- Built custom libraries for multi-channel LED drivers on Raspberry Pi, enabling I2C communication to control digital signals
- Developed a portable LED dimmer system using LED strips and Arduino, ensuring stable operation and real-time feedback

Teaching Group, Academic Department, NTUEE Student Association — *Taipei, Taiwan*
Raspberry Pi Course Instructor — *May 2023*
- Designed and delivered a comprehensive RPi course, teaching students to set up and program RPi from scratch
- Taught practical skills in Linux and C, enabling students to independently develop real-world projects using Raspberry Pi
- Led students in hands-on projects integrating external modules, applying concepts in embedded systems and IoT

Awards

2023	**Second Prize & Global Nominee**, NASA International Space Apps Challenge in Taiwan	⊙ NASA	*Taipei, Taiwan*
2021	**Grand Prize & PixArt Inc. Prize**, Meichu Hackathon	⊙ Meichu	*Hsinchu, Taiwan*
2021	**Third Prize**, NTUEE Undergraduate Innovation Award		*Taipei, Taiwan*
2021	**EECS Second Prize**, MakeNTU		*Taipei, Taiwan*
2021	**Best Creative Award**, Final Contests of Cornerstone EECS Design and Implementation		*Taipei, Taiwan*