Chi-Jui(Jerry) Chang

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Education

National Yang Ming Chiao Tung University (NYCU) Hsinchu, Taiwan
Master of Science in Institute of Computer Science and Engineering September 2023 – Now
- **GPA:** 4.23/4.3

Nanyang Technology University (NTU SG) Singapore
Exchange Student in School of Computer Science and Engineering January 2023 – May 2023

National Yang Ming Chiao Tung University (NYCU) Hsinchu, Taiwan
Bachelor of Science in Department of Computer Science September 2019 – June 2023

Related Coursework

Operating System Capstone (Grade: A+)
- Implement simple OS on Raspberry Pi 3b+, including UART, Bootloader, Interrupt, Memory Allocator, Thread, Virtual Memory, Virtual File System and Non-volatile Storage.
- Bare Metal Programming with C and Assembly.
- Project repo: https://github.com/jerryyyyy708/osc2024

Advanced Programming in the UNIX Environment (Grade: A+)
- Understand topics such as Kernel Module, Library Injection, GOT Table, Buffer Overflow, and PTRACE in the UNIX environment and apply them in programming.
- Project repo: https://github.com/jerryyyyy708/NYCU_UNIX_Programming_2024

Deep Learning Practice (Grade: A+)
- Implement deep learning models such as ResNet, CVAE, RL-based model, and DDPM.
- Object Detection with Image Adaptive Module and Multi-Scale Domain Adaptive Network.
- Project repo: https://github.com/jerryyyyy708/NYCU_DLP_2023_Summer

Embedded System Design (Grade: A)
- Building a cross compile environment on Ubuntu 14.04 and developing programs with C++ and OpenCV that run on a development board, which interact with the camera and framebuffer.
- Project repo: https://github.com/jerryyyyy708/NYCU_Embedded_System_Design_2023

Research

DL-KDD: Dual-Light Knowledge Distillation for Action Recognition in the Dark
- Achieves State-Of-The-Art accuracy in the task of action recognition in the dark.
- Improve model performance while maintaining computational cost by knowledge distillation.
- Paper Link: https://arxiv.org/abs/2406.02468

Work Experience

AmCad BioMed Taipei, Taiwan
Research and Development Intern July 2022 – August 2022
- Training YOLOv4 object detection model for Ultrasound Images, reduced 11.7% miss rate.
- Develop software functions with C#.

Industrial Technology Research Institute (ITRI Taiwan) Hsinchu, Taiwan
Information and Communications Research Laboratories Intern November 2022 – December 2022
- Testing OCR models and table structure detection models and analyze the result.

- Model training and software functions development with Python.
- Search and present papers with relevant topics of OCR models.

Projects

Android Song Writing APP May 2022 – June 2022

- A song writing app based on Java, using Android Studio for development.
- Use SQLite to maintain the database of songs.

YouTube Revenue Data Analysis December 2023

- Using dataset collected from my own YouTube channel.
- Provide data visualization with JavaScript (D3.js).
- Embed YouTubeAPI for revenue prediction with video link and develop webapp with FLASK. Demo page deployed on render.com.
- Project website: https://jerryyyyy708.github.io/pages/YT_vis.html

Citation Monitoring LineBot November 2023

- Obtain the citation count of target paper regularly to follow newly publicized paper.
- Notify users by LineBot whenever the monitored paper has a new citation.

Mouse Scratching Analysis January 2024 – Now

- Train object detection models (YOLOv4, YOLOv7, Deformable-DETR) for mouse scratching detection.
- Design post-processing algorithm for scratching count calculation and reach over 90% accuracy.
- Integrate the model to an online detection platform for real-world application by FLASK.

Lab Experience

Teaching Assistant: Data Mining September 2024 – Now

- Prepare course assignments, project feedbacks, and exams.

Lab Website Manager September 2023 – Now

- Manage lab website and lab member database.
- Update publications or detail information of the lab and professor's web page regularly.

Programing Skills

C, C++ (Environment: Linux/UNIX, ARM)
Python (DL/ML Framework: PyTorch, Scikit-Learn)
Web: HTML/CSS/JavaScript (D3.js, React.js), HUGO, FLASK
Java (Android Studio)

Language

Chinese: native language
English: TOEFL iBT 100/120 (reading 24/30, listening 28/30, speaking 22/30, writing 26/30)