Ting-Hsuan Chen

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EDUCATION

University of Southern California (USC), Los Angeles, CA, United States
Viterbi School of Engineering - MS in Computer Science   Aug 2024 - present

National Chung Hsing University (NCHU), Taiwan
Department of Applied Mathematics (DAM) - Computer Science Group   Sep 2019 - Jun 2023
- Final Average Score: **96.6%**; GPA: **4.27/4.3**
- Graduated as the Top 1 student, achieving the first position in each of the eight semesters
- Admitted as the representative of the College of Science to the Phi Tau Phi Honor Society
- Elected to serve as the Valedictorian; Served as the Class President for four years

WORK EXPERIENCE

University of Southern California
Research Assistant   Aug 2024 - present
- Joined Prof. Yue Wang's laboratory, engaged in various computer vision research (such as 3D reconstruction, diffusion model, etc.), and participated in industry-academia collaboration with NVIDIA.

National Yang Ming Chiao Tung University
Research Assistant   Jan 2024 - Jun 2024
- Entered Prof. Yu-Lun Liu's laboratory, led the Google industry-academia collaboration project, and participated in another partnership with MediaTek.

Foxconn, Hon Hai Precision Industry Co., Ltd, Taiwan
R & D Engineer   Oct 2023 - Dec 2023
- Designed and Developed API
- Developed a novel patented system that met international medical certifications, integrating three major technologies: AI, CV, and signal processing.
- Represented Foxconn in various medical conferences

Intern   Jul 2023 - Sep 2023
- Built and trained AI models
- A range of tasks, spanning from establishing APIs to facilitate communication between software components, developing application systems, to managing databases, and maintaining servers

SKILLS

- Programming: Python, C, Java, MySQL, MATLAB, HTML, CSS, JavaScript, C#, LaTeX
- Languages: Native in Chinese; Fluent in English

PUBLICATION

- **Ting-Hsuan Chen**, Jiewen Chan, Hau-Shiang Shiu, Shih Han Yen, Changhan Yeh, Yu-Lun Liu. "NaRCan: Natural Refined Canonical Image with Integration of Diffusion Prior for Video Editing" A video editing framework integrates a hybrid deformation field network with diffusion priors to address the challenge of maintaining the canonical image as a natural image.

- Changhan Yeh, Chin-Yang Lin, Zhixiang Wang, Chi-Wei Hsiao, **Ting-Hsuan Chen**, Yu-Lun Liu. "DiffIR2VR-Zero: Zero-Shot Video Restoration with Diffusion-based Image Restoration Models" This paper introduces a novel zero-shot video restoration method using pre-trained image restoration diffusion models, achieving excellent performance across diverse datasets and extreme video degradations.

SELECTED PROJECTS

- Neural ODE and B-spline transformer GPU version (Python)

- · Simple Account Management System (Java, MySQL)
- · Automatic Seedling Detection Neural Network (PyTorch)
- · Automatic Course Selection Crawler (Selenium, Beautiful Soup)
- · GAN-Based Rain Streak Removal Neural Network (TensorFlow)

EXTRACURRICULAR ACTIVITIES

Information Department, Student Association of DAM, NCHU
Founder and Director   Sep 2022 - Jun 2023
- · Drafted proposals, applied for funding, and planned departmental courses
- · United passionate students in information, collaborated on project development and gained practical experience collectively

Student Association of DAM, NCHU
Network Administrator   Jan 2020 - Jun 2023
- · Managed network hardware devices and installed, configured, and maintained network-related software
- · Quickly addressed network failures and tracked the resolution of issues
- · Offered programming tutorials to enhance the professional skills of fellow students

Department of Applied Mathematics, NCHU
Teaching Assistant   Sep 2021 - Jun 2022
- · Assisted in teaching the Statistics and Data Science courses
- · Provided additional learning support to fellow students