

PING-YI CHEN

Email: a931eric@gmail.com | [Website](#) | [GitHub](#)

EDUCATION

National Cheng Kung University

Bachelor of Computer Science and Information Engineering (GPA: 3.9/4.3)

Sep 2021 - Pres.
1st semester, 2021

- Academic excellence award (Top 5%)
- Admitted under the Special Admissions Program

Taoyuan Municipal Wu-Ling Senior High School

Science Gifted Class

Sep 2018 – Jun 2021

INTERNSHIP

Academia Sinica

Research Intern, Research Center for Information Technology Innovation

July 2022 – Aug 2022

- Increased training speed of video diffusion model by 3.5x using PyTorch distributed data parallel across 4 GPUs on Taiwan2 supercomputer
- Built an automatic data pipeline for downloading audio, transcribing, beat tracking, and chord recognizing with SOTA methods which has processed 2700 music pieces
- Built a website for demonstrating playable midi scores with Vue and Pixi.js - [Website](#)

RESEARCH

Using VAE-pix2pix to Generate Realistic Mountain Terrain, First Author

Sep 2019 – Dec 2020

- [Paper](#) | [Demo](#)

Supervisor: Prof. Mu-Chun Su, Sih-De Liou

- Achieved 51% lower FID and 39% lower L1 loss on heightmap generation by incorporating a VAE into the baseline Pix2pix model
- Won second prize in the CSIE category in National Primary and High School Science Fair

Piano Music Generation Using Video Diffusion Model

July 2022 – Feb 2023

- [Demo](#)

Supervisor: Prof. Yi-Hsuan Yang

- Developed a polyphonic music generation model capable to be conditioned by chord, melody, prompting and infilling without retraining by guiding the generation with the gradient of various objectives in inference time

LEADERSHIP

Grapycal Development Team – Website | [Demo](#)

NCKU

Organizer/Main Contributor

May 2023 – Pres.

- Grapycal is an interactive visual programming platform
- Bring together a 5-people team with professions across Python dev, front-end dev and SRE
- Keep the project progress by organizing weekly meetings, building community networks, and designing a Python API for people to contribute easily in the form of external extensions
- Developed a framework for real-time synchronization of state across a Python server and multiple Javascript clients based on websocket
- The project gained 40 GitHub stars and 140 Facebook followers within 10 days after publishing

Team NCKU, 5th APAC HPC-AI Competition

NCKU

Captain

Jun 2022 – Nov 2022

- Won third place and best deep learning performance award among 24 teams from 12 different countries
- Increased PRAUC by 34% on DNA segmentation by performing automatic hyperparameter tuning on the original LEOPARD model

ACTIVITIES

- Teaching assistant at 2023 Fun AI Winter Camp, 2022 SITCON Hour Of Code, and 2021 Coding-X Python Camp
- Instructor at Wu-Ling Information Studying Club
- Participant of NTHU HPC X AI Summer Camp
- Participant of COSCUP 2023, PyCon Taiwan 2023, and SITCON 2022

SKILLS & AWARDS

- 20th Macronix Science Awards - Outstanding projects
- Score 890 on TOEIC
- 6 years of experience in C#; 4 years of experience in Python; familiar in Docker, Git, and Linux