FEI-YUEH CHEN

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EDUCATION

University of Rochester

Rochester, New York

M.S. in Computational Linguistics

Aug 2024 - expected 2026

Sound Track

National Taiwan University

Taipei, Taiwan

B.A. in Economics, minor in Mathematics

Sep 2017 - Jun 2022

Dean's List Award

WORKING AND RESEARCH EXPERIENCE

AIR Lab, Department of ECE, University of Rochester

Rochester, New York

Aug 2024 - Now

Graduate Research Student

- Advisor: Dr. Zhiyao Duan
- Developing a MIDI-to-Image encoding method for long-term (>5 min) music generation diffusion models.
- Creating a large-scale multimodal music dataset.
- Designing piano education and editing tools powered by LLMs.

CCL Lab, Department of Economics, National Taiwan University

Taipei, Taiwan Jun 2024 - Aug 2024

Research Intern

• Advisor: Dr. Kuan-Ming Chen

- Developing a pipeline for high-correctness feature extraction and summarization from Mandarin verdicts via LLMs and prompt engineering techniques.
- Creating tutorials and documentation on using LLMs for lab members without a computer science background.

Natural Language Processing and Sentiment Analysis Lab, IIS, Academia Sinica

Taipei, Taiwan Sep 2022 - Jun 2024

Research Assistant

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- Advisor: Dr. Lun-Wei Ku
- Worked on prompt engineering and LLM projects, cooperating with industries. See Professional Projects.
- Worked on full-stack development for the project **Omiyage**, an interactive art system using LLMs, Python Flask, BootStrap5, JQuery and HTML skills. This project was the winner of Taiwan Future Tech Award 2023.

Music and Artificial Intelligence Lab, IIS, Academia Sinica

Taipei, Taiwan

Research Assistant

Sep 2021 - Aug 2022

- Advisor: Dr. Yi-Hsuan Yang
- Developed a new method for MIDI tokenization of symbolic music generation, enabling the transformer model to generate lyrics and melody simultaneously.
- Achieved better rhyming fluency for the lyrics generation by considering several types of phonemes and 2-stage generation.

Fubon Life Insurance

Taipei, Taiwan

Data Analysis and Marketing Intern

July 2019 - Dec 2019

- Collected financial news and Federal Reserve policy reports by web crawling using Python.
- Organized market data into content for the sales team using data visualization techniques.

PUBLICATION

Chen, F.-Y., Chen, K.-M., Huang, P. C.-C., & Shih, B.-C. (2024). The effect of lay participation in criminal trials: Evidence from Taiwan. In 20th Annual Conference of Asian Law and Economics Association 2024.

PROFESSIONAL PROJECTS

"The Age of AI Has Begun? Now Loading..." Special Exhibition at the Taipei International Book Exhibition (2024). Modified Omiyage to emulate research scientists, demonstrated their research techniques and engaged with the audience by answering their questions, creating an interactive and educational environment. Omiavge was one of the listed techniques.

"An Elegant Day: Yua Mikami's Fantasy World." at Tsutaya Bookstore (2024) Organized art exhibition and media event with Yua Mikami and Tsutaya Bookstore, showcasing her transition from idol to artist and her creative talents. Omiyage was used to create a virtual character to introduce her arts and interact with online users.

"Omiyage", an Interactive Art System (2023). Developed and implemented the award-winning "Omiyage" Immersive Visual Arts Interaction System," combining deep learning multimodal models to create personalized and interactive art experiences, earning the Future Technology Award at the 2023 Taiwan Innovation Expo.

"Chatting up Cultural Relics" at Museum of Institute of History and Philology, Taiwan (2023). Developed an interactive system enabled visitors to engage directly with national treasure exhibits, specifically the Niu Fang-ting (Bronze Square Cauldron with an Ox Emblem) and the Lu Fang-ting (Bronze Square Cauldron with a Deer Emblem), facilitating an interactive experience to learn about their cultural backgrounds.

TEACHING EXPERIENCE

Capstone Project for Data Science and Social Inquiry

Spring 2022

Department of Economics, National Taiwan University

Teaching Assistant

- Instructor: Dr. Ming-Jen Lin and Dr. Ji-Lung Hsieh
- Assisted the professor in contacting companies for student internships.
- Assisted students in participating in and preparing for competitions.

Data Science and Social Inquiry

Fall 2021

Department of Economics, National Taiwan University Teaching Assistant

- Instructor: Dr. Ming-Jen Lin and Dr. Ji-Lung Hsieh
- Graded assignments and the mid-term exam.
- Answered to students' questions about the R Tidyverse and Dplyr.

Chinese Debate Club

Spring 2019, Fall 2019

Wego Private High School

Lecturer and Debate Coach

- Provided weekly courses to high school students for 2 semesters.
- The debate team won 2 domestic competitions championships under my supervision.

EXTRA-CURRICULAR ACTIVITIES

- (2024) Volunteer of SHINING HOPE, a photography-inspired learning program focusing on conducting photography classes and leading practical photography sessions for elementary school students in resource-limited remote areas.
- (2022) Official Photographer of the Taipei Music Non-stop and the Chill Out Music Festival.
- (2021) Songwriter of the NTU graduation song "School Days With The Dumbo Bird".
- (2021) Songwriter of the NTU Orientation Camp song "Universe of The Drunken Moon Lake".