

FEI-YUEH CHEN

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EDUCATION

University of Rochester

M.S. in Computational Linguistics

Rochester, New York

Aug 2024 - expected 2026

National Taiwan University

B.A. in Economics, minor in Mathematics

Dean's List Award

Taipei, Taiwan

Sep 2017 - Jun 2022

RESEARCH EXPERIENCE

AIR Lab, Department of Computer Science, University of Rochester

Graduate Research Student

Rochester, New York

Aug 2024 - Now

- Advisor: Dr. Zhi-Yao Duan
- Developing a MIDI-to-Image encoding method for long-term (>5 min) music files, which could be used in diffusion models.

CCL Lab, Department of Economics, National Taiwan University

Research Assistant/Expert Consultation

Taipei, Taiwan

Mar 2024 - Aug 2024

- 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

Research Assistant

Taipei, Taiwan

Sep 2022 - Jun 2024

- Advisor: Dr. Lun-Wei Ku
- Developing **Llama2music**, a model for symbolic music generation using Llama2 and LORA.
- 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

Research Assistant

Taipei, Taiwan

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.

Department of Economics, National Taiwan University

Undergraduate Research Student

Taipei, Taiwan

Sep2020 - Jul 2021

- Advisor: Dr. Ming-Ching Luoh
- Applied the Difference in Difference estimation (DID) method to analyze the relationship between the COVID-19 pandemic and various crime rates in Taiwan.
- Cleaned 20+ years of raw Taiwan Criminal Court Judgments Using R Tidyverse and Python Pandas.

PUBLICATION

Fei-Yueh Chen, Kuan-Ming Chen, Patrick Chung-Chia Huang, Bin-Chi Shih, "The Effect of Lay Participation in Criminal Trials: Evidence from Taiwan." in 20th Annual Conference of ASLEA 2024.

WORKING EXPERIENCE

Fubon Life Insurance

Data Analysis and Marketing Intern

Taipei, Taiwan

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.

PROJECTS

Two-stage Analysis of Computed Tomography Segmentation Processing and Deep Learning Models in the Diagnosis of Ovarian Cancer. Developed a classifier to diagnose ovarian cancer in X-ray computed tomography with 95% accuracy using Vision Transformer, DenseNet, and ensemble techniques.

War of 0&1. A 2D pixel game built by Unity and C#. The gameplay is similar to Vampire Survivor. All the assets in this game including stories, music and images are original creations. This game was recommended to participate in the Taipei Game Show.

Using News Analysis to Predict Retail Investors' Actions in the Stock Market. Extracted features from Yahoo News using TF-IDF and sentiment databases, and predicted retail investors' behavior using Multinomial Logistic Regression.

TEACHING EXPERIENCE

Capstone Project for Data Science and Social Inquiry

Department of Economics, National Taiwan University

Teaching Assistant

Spring 2022

- 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

Department of Economics, National Taiwan University

Teaching Assistant

Fall 2021

- 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

Wego Private High School

Lecturer and Debate Coach

Spring 2019, Fall 2019

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

EXTRA-CURRICULAR ACTIVITIES

- Actively take photos for indie bands using both film and digital cameras. ([Photos on Instagram](#))
- (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](#)".

LEADERSHIP

- (2020) **Camp Counselor** of the [NTU Securities Research Society Club](#).
- (2019, 2020) **Camp Counselor** of the 12th and 13th [NTU Orientation Camp](#). Performing my own written songs on a stage in front of 1500+ people.
- (2019) **Vice president** of the [NTU Lyrics and Melody Club](#). Organized a music night with 300+ attendees and several on-campus concerts.