

Yi-Hsin Lu



CONTACT

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📍 Taichung

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SKILLS

Programming

R
PostgreSQL
Python
LaTeX

Software & Tools

Visualisation
(e.g. plotly, t-SNE, ...)
Data Analysis
(e.g. PCA, tidyverse, ...)
Machine Learning
(e.g. Random Forest, ...)
Website Design
(e.g. HTML, CSS, ...)

Languages

Chinese
English

EDUCATION

Master

Applied Mathematics

📅 02/2021 - 06/2023

📍 National Dong-Hwa University

👤 Adviser: Prof. Chen-Hai Andy Tsao

📄 Visualization for Jazz Musicians

Bachelor

Statistical Science

📅 09/2014 - 09/2019

📍 National Dong-Hwa University

ABOUT ME

- I have been interested in researching since I worked at Academia Sinica as an assistant.
- I want to do more about combining statistical techniques with different fields such as music, education, sports, etc.
- I am not afraid to challenge or learn new things.

TECHNICAL EXPERIENCE

Volleyball Matches/Players Visualization

Interest-Driven Project

📅 10/2023 - Present
📍 Home

📄 [Dataset](#) (Team Taipei KingWhale from Taiwan Top Volleyball League)
📊 [Visualization](#) for the matches. (including the visualization for players)
🐙 [Github Repository](#)

- Developed a map visualization for displaying player data during volleyball matches.
- Implemented histograms and tables to effectively illustrate match information between teams.
- The map highlights relationships and statistics among players in different positions.
- Streamlined information accessibility, saving players valuable time by eliminating the need to navigate through extensive data tables.

Visualization for Jazz Musicians

Thesis

📅 06/2021 - 06/2023
📍 National Dong-Hwa University

👤 Adviser: Prof. Chen-Hai Andy Tsao
📄 [Thesis PDF](#)
📊 [Maps for Jazz Musicians](#)

- Displayed the visualization as a map.
- Utilized three primary colors on multi-value variables.
- Illustrate the relationship between musicians by their distance and color based on variables, such as instruments, genres, etc.
- Utilized PCA (Principal Component Analysis) and t-SNE (t-distributed Stochastic Neighbor Embedding) to generate the map from the data matrix.
- The map provides richer insights compared to network graphs, exemplified by the acclaimed visualization at [Linked Jazz](#).

TECHNICAL EXPERIENCE

Music Feature (Statistical Machine Learning)

Class Project

📅 09/2022 - 01/2023
📍 National Dong-Hwa University

👤 Adviser: Prof. Chen-Hai Andy Tsao

- Applied statistical machine learning techniques to filter audio genres based on their features.
- Achieved a 70% accuracy using the random forest model.
- [Final Presentation PDF](#)

S&P Global Rating Xpress Dataset

Dataset Management

📅 08/2022 - 01/2023
📍 National Dong-Hwa University

👤 Adviser: Prof. Chih-Kang Chu

- Utilized PostgreSQL to create a connection with the online database, facilitating data updates in local storage.
- Developed a data transformation function using R, ensuring data accuracy and cleanliness.
- [How to update the data](#) into a txt file. (included R and SQL source code)
- [How to update the data](#) into PostgreSQL from the online database on S&P Global.

CONFERENCES

The 32nd South Taiwan Statistics Conference

and the 2023 Chinese Institute of Probability and Statistics Annual Meeting

📅 06/26/2023 - 06/30/2023
📍 National Dong-Hwa University

- Presenter: Presented Thesis (Visualization for Jazz Musicians).
- Staff Member: Helped to award the prizes and anything.

2022 AI & Data Science Workshop

📅 01/24/2022 - 01/26/2022
📍 National Dong-Hwa University

- Staff Member

The 30th South Taiwan Statistics Conference

and the 2021 Chinese Institute of Probability and Statistics Annual Meeting

📅 10/30/2021 - 10/31/2021
📍 National University of Kaohsiung

WORK HISTORY

Research Assistant

Institute of Information Science

📅 09/2019 - 01/2020
📍 Academia Sinica
👤 Adviser: Prof. Jan-Ming Ho

Data analysis and database for macroeconomics variables

CLUB EXPERIENCE

Captain

Men's Volleyball Department Team

📅 08/2022 - 06/2023
📍 National Dong-Hwa University

Coach

Women's Volleyball Department Team

📅 01/2023 - 06/2023
📍 National Dong-Hwa University

Bandleader

Chinese Music Orchestra

📅 09/2016 - 07/2017
📍 National Dong-Hwa University

SPECIAL EXPERIENCE

Left-handed

Broke Right(Dominant hand) Finger

📅 09/2018 - 06/2019
📍 National Dong-Hwa University

I had to withdraw from my fifth-grade university studies when I suffered a severe injury to my right finger during a volleyball match. Despite this setback, I was determined to graduate by the end of the semester and didn't want to give up. Fortunately, I had trained my left hand to perform various tasks such as writing, using chopsticks, and brushing my teeth when I was a kid.

As a result, I decided to switch to taking class notes and completing exams with my left hand. It wasn't an easy adjustment, but I persevered. In the end, I successfully passed all my classes that semester and graduated from the university.