

# Yi-Hsin Lu (呂一昕)



## CONTACT

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📍 Taichung

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👤 Yi-Hsin Lu

## SKILLS

### Programming

R   
PostgreSQL   
Python   
LaTeX 

### Software & Tools

Visualization   
(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

📄 Thesis title: 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 a research assistant.
- I would like to work on by employing statistics and mathematics background.
- I would like to learn new things.

## TECHNICAL EXPERIENCES

### 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](#).

### 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.

## TECHNICAL EXPERIENCES

### 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

👤 PI: 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 EXPERIENCES

### 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

### From Right-handed to Left-handed

Broke Right Finger

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

When I was graduating, 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 have trained my left hand to perform various tasks such as writing, using chopsticks, and brushing my teeth since 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.