Hao-Lin (Alex) Chiang

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EDUCATION

University of Maryland, College Park — ***Maryland, MD***
Master of Data Science — ***Expected Jan. 2026***
Coursework: Machine Learning, Data Science, Probability and Statistic

National Yang Ming Chiao Tung University — ***Taiwan***
Bachelor of Applied Mathematics — ***June 2023***
- *Minor: Artificial Intelligence-Engineering and Science*

Coursework: Lab on Python for Data Science and Machine Learning, Python and IOT Data Analysis, Applied Methods in Statistics

WORK EXPERIENCE

Google — ***Taiwan***
Data Center Technician Intern — ***June 2022 – Sept 2022***
- Built a **SQL-based project database** and a centralized dashboard to visualize data center operations, which empowered the team to make data-driven decisions regarding logistics. This project reduced information collection costs by **30%**.
- Developed a search tool that utilized **Google Apps Script, JavaScript, and Spreadsheet API** to significantly enhance the efficiency of Google technicians in locating critical server components, reducing search time by **20%.**
- Collaborated with cross-functional teams to maintain network equipment and servers, applying problem-solving and troubleshooting skills to ensure operational efficiency and minimize downtime.

SKILLS

Programming Languages: Python, SQL, R, Matlab, JavaScript, C/C++, HTML/CSS
Technologies: Machine Learning (Scikit-learn, PyTorch), Data Visualization (matplotlib, seaborn), Excel, Docker, Git, Linux

SELECTIVE PROJECT

Principles of Data Science, University of Maryland-College Park — ***Maryland, MD***
Analysis of High-Voltage Battery Performance in Electric Vehicles — ***Sept 2024 – Dec. 2024***
- Evaluated BMW i3 high-voltage battery performance using real-world driving data, applying **linear and tree-based models** with the **Scikit-learn** library to identify environmental and vehicle factors impacting efficiency.
- Achieved an R^2 score of 0.8797 using **LASSO Regression** and provided insights for optimizing battery management.
- Preprocessed and integrated 70+ datasets, conducted feature extraction, and implemented data correction for robust model performance.

Applied Methods in Statistics, National Yang Ming Chiao Tung University — ***Taiwan***
Statistical Analysis of MLB and NBA Data — ***Feb. 2023 – June 2023***
- Performed comparative analysis using **R** to identify non-traditional data's impact on team performance.
- Applied statistical techniques, including **hypothesis testing** and **regression analysis**, to derive actionable insights into key performance indicators on team performance.

Lab on Python for data science and machine learning, National Yang Ming Chiao Tung University — ***Taiwan***
Chord generator — ***Sept 2022 – Dec. 2022***
- Built a **Recurrent Neural Network (RNN)** model in Python and PyTorch to generate piano chords in real-time.
- Collaborated with a team of four to integrate a music generative model into a web application, enabling users to input chords and receive real-time generated musical sequences via an interactive webpage.

Introduction to Data Science, National Yang Ming Chiao Tung University — ***Taiwan***
Face Forgery Detection-Lips Don't Lie — ***Feb. 2022 – June 2022***
- Utilized **PyTorch** and **deep learning** techniques to build a **computer vision** model for face forgery detection based on the "Lips Don't Lie" paper by Alexandros Haliassos et al.
- Applied **data augmentation and feature extraction techniques** to improve the model's generalizability across different datasets, ensuring robustness in detecting forgery in facial videos.

LEADERSHIP

National Yang Ming Chiao Tung University — ***Taiwan***
Academic Program leader, Camp of University Life at NYCU — ***Sept 2020 – Jan. 2021***
Led a team of 12 to organize and coordinate a university life camp for 60 high school students, providing insights into academic departments through workshops and discussions.