Jay Chiehen Liao

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4+ years of experience in **Data Science** & **Machine Learning** • Proficient in **Python** & **R** programming• 10+ **AI/ML competitions**
6+ years of experience in **Data Analysis** & **Statistics** • **Git**, **Linux**, **GPU**, **GCP** • 10+ academic presentations in various domains •
Skilled in communication, model explanation, and problem-solving • **Interdisciplinary** backgrounds

WORK EXPERIENCE

FAZZ.COM
Data Scientist (full-time)
Sep 2022 - present | Taipei, Taiwan (Hybrid)
- Focus on reconciliation and fraud & anomaly detection.
- Help increase anomaly detection performance by 25%.

NETWORKS & AI LAB, NCKU
Research and Teaching Assistant (part-time)
Aug 2020 - present | Tainan, Taiwan (Hybrid)
- Research topics: Machine learning with graphs, graph neural network (GNN), deep learning for tabular data.
- Managed Linux servers with GPUs.

HEALTH BEHAVIOR LAB, NCKU
Research Assistant (part-time)
Jan 2017 - Jul 2020 | Tainan, Taiwan
- Data analysis with R & Python for 5+ projects.

EDUCATION

RENNES SCHOOL OF BUSINESS (RSB)
Master in Data & Business Analytics (GPA=4.25/5)
Sep 2021 - Apr 2022 | Rennes, France
- Graduation Project: *Identifying Key Features of Standard Essential Patents in Information and Communication Technologies with Explainable Machine Learning*

NATIONAL CHENG KUNG UNIVERSITY (NCKU)
Master in Data Science (GPA=4.25/4.30)
Aug 2020 - Aug 2022 | Tainan, Taiwan
- The 1st Place, Academic Performance of The 1st Year
- Thesis: *Learning Graph Structures from Tabular Data for Downstream Classification Tasks*

Double Bachelor in Statistics and Psychology
Sep 2015 - June 2020 | Tainan, Taiwan

SKILLS

LANGUAGES
English Professional working proficiency (TOEIC 925/990)
Mandarin/Chinese Native **French** Elementary

TECHNICAL SKILLS

Programming Python • R • Ruby on Rails **Markup Languages** Markdown • R Markdown • LaTeX **Version Control** Git
Development Environment VS Code • Jupyter • RStudio **Operation Systems** macOS Intel/M1 • Linux • Windows
Machine Learning PyTorch • Scikit-Learn **Graph Analysis** NetworkX • PyTorch-Geometric **Cloud computing** GCP
Data Manipulation NumPy • Pandas • dplyr • tidyr • SPSS • MS Excel
Data Visualization ggplot2 • Matplotlib • Seaborn **Data Management** MySQL • Big Query • metabase2

KEY PROJECTS & AWARDS

Predictive Modeling for 14-day Unplanned Hospital Readmission Risk by Using Machine Learning Algorithms
BMC Medical Informatics and Decision Making (2021)
- Constructed ML models with promising performance to predict patients' readmission.
- Figured out influential features with model explanations.
My roles: Co-first author of the paper • Model constructor
Skills used: Python • Catboost • Feature Engineering

A Mobile App (UPrEPU) to Monitor Adherence to Pre-Exposure Prophylaxis in Men Who Have Sex with Men: A Protocol for a User-Centered Approach Mobile App Design and Development
The JMIR Research Protocols (2020)
My jobs: Conveyed public health rules with pseudo-codes to communicate with development engineers • Data cleaning
Skills used: Pseudo-code • Python • R

TOP 1 out of 401 teams
Chunghwa Post Big Data Competition 2019
- Established ML models and proposed commercial solutions from the big data (>30GB) to reduce failed delivery rate (reduced about 65% eventually).
- Evaluated the proposed system in terms of ML performances, flexibility, and estimation of cost reduction (USD 376K and 44.8K hrs per year in Taipei City).
My roles: Leader • Model constructor • Presenter
Skills used: Python • R • GBDT • Visual machines

TOP 3 out of 859 teams
Recommendations of Credit Card Spending Categories 2021 (E.SUN Bank)
Skills used: Python • Transformer • GBDT

TOP 25%
AI CUP Fall 2020 - Medical Information De-identification (Dept. of Computer Science and Information Engineering, NCKU)
Skills used: Python • NLP • Transformer

EXCELLENT AWARD Certificate of Statistic Analysis (The Chinese Applied Statistics Association)

ADVANCED AWARD (TOP 3%) Competition of Statistics (NCKU)