

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)

- Developing a fraud detection system with graph analysis for micro-loan.
- Developed and maintaining detection models for fraudulent transactions with cryptocurrencies.
- Improved the anomaly detection model's performance by about 25% in terms of the true positive rate.
- Working with the CFO for financial reconciliation.

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* (awarded by Taiwanese Association Artificial Intelligence)

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 **DATA MANIPULATION** NumPy • Pandas • dplyr • tidyr • SPSS • MS Excel
DATA VISUALIZATION ggplot2 • Matplotlib • Seaborn **DATA MANAGEMENT** MySQL • Big Query • metabase2
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

Updated on 13 March 2023

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 (about 65%).
- 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)**