

Jay Chiehen Liao

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3+ years of experience in **Data Science & Machine Learning** • Proficient in **Python & R** programming • 10+ AI/ML competitions
5+ 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

EDUCATION

RENNES SCHOOL OF BUSINESS (RSB) MASTER IN DATA & BUSINESS ANALYTICS

Sep 2021 - Apr 2022 | Rennes, France

- Graduation Project: *Using Text Analysis to Explore the Role of Standard Essential Patents in Information and Communication Technologies and Artificial Intelligence*

NATIONAL CHENG KUNG UNIVERSITY (NCKU) MASTER IN DATA SCIENCE (GPA=4.25/4.30)

Aug 2020 - Jul 2022 (expected) | Tainan, Taiwan

- The 1st Place, Academic Performance of The 1st Year (outgoing aboard in the 2nd year)
- Thesis: *Learning Graph Structures from Tabular Data for Downstream Classification Tasks*

DOUBLE BACHELOR IN STATISTICS AND PSYCHOLOGY Sep 2015 - June 2020 | Tainan, Taiwan

WORK EXPERIENCE

NETWORKS & AI LAB, NCKU

RESEARCH AND TEACHING ASSISTANT

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 AND TEACHING ASSISTANT

Jan 2017 - Jul 2020 | Tainan, Taiwan

- Research topics: Social networks & sexually transmitted infections, health behavior interventions with technology, adolescent mental health.
- Data analysis with [R](#) & [Python](#) for 5+ projects.

SKILLS

TECHNICAL SKILLS

PROGRAMMING Python • R **VERSION CONTROL** Git
MACHINE LEARNING PyTorch • Scikit-Learn
GRAPH NEURAL NETWORK NetworkX • PyTorch-Geometric
DATA MANIPULATION dplyr • NumPy • Pandas
DATA VISUALIZATION ggplot2 • Matplotlib • Seaborn
DATA MANAGEMENT MySQL
DEVELOPMENT ENVIRONMENT VS Code • Jupyter • RStudio
MARKUP LANGUAGES Markdown • R Markdown • \LaTeX
CLOUD COMPUTING Google Cloud Platform
OPERATION SYSTEMS Linux • macOS • Windows

LANGUAGES

ENGLISH TOEIC 925/990 **MANDARIN/CHINESE** Native

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](#) • [R](#) • [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](#) • [R](#) • [GBDT](#)

TOP 8

BUSINESS MODEL AND BIG DATA ANALYSIS ARTIFICIAL INTELLIGENCE COMPETITION 2020 (TAISHIN BANK)

MY ROLES: [Data analyst](#) • [Presenter](#)

SKILLS USED: [Python](#) • [R](#) • [Xgboost](#) • [GNNs](#)

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)