

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
- Thesis: Learning Graph Structures from Structured and Unstructured Data for Downstream 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**

MACHINE LEARNING **PyTorch** • **Scikit-Learn** • **NumPy**

GRAPH NEURAL NETWORK **NetworkX** • **PyTorch-Geometric**

DATA VISUALIZATION **ggplot2** • **Matplotlib** • **Seaborn**

DATA MANAGEMENT **MySQL** VERSION CONTROL **Git**

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 2022 (E.SUN BANK)

SKILLS USED: **Python** • **R** • **GBDT** • **Time Series**

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 (CSIE, NCKU)

SKILLS USED: **Python** • **NLP** • **Transformer**

EXCELLENT AWARD CERTIFICATE OF STATISTIC ANALYSIS
(THE CHINESE APPLIED STATISTICS ASSOCIATION)

ADVANCED AWARD COMPETITION OF STATISTICS (NCKU)