LIANG-JEN HUANG

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Education

Uppsala University (UU)   Uppsala, Sweden
M.S. Statistics and Data Science (1-year program)   Sep. 2025 – Present

- Advanced training in statistical methods and modeling, bridging statistical theory with applied data science.

National Cheng Kung University (NCKU)   Tainan, Taiwan
Graduate studies in Data Science   Sep. 2023 – Jun. 2025

- GPA: 4.2/4.3, Banyan Garden Statistics and Education Foundation Scholarship (2024)
- Studied AI/ML methods and conducted GNN research at the Networked Artificial Intelligence Laboratory.

National Taipei University (NTPU)   Taipei, Taiwan
B.A. in Statistics   Sep. 2019 – Jun. 2023

- GPA: 3.8/4.0, Academic Excellence Award (2022)
- Formal training in mathematics, statistics, programming, and foundational machine learning and deep learning.

Professional Experience

United Microelectronics Corporation (UMC) - Top semiconductor firm, €15B cap   Tainan, Taiwan
Data Scientist, Intern   Jul. 2024 – Sep. 2024

- Developed a Chat-Style Data Analysis Assistant by integrating Generative AI into an analysis framework, making analytics accessible across teams and improving workflow efficiency. (Python, LangChain, FastAPI, Streamlit)
- Participated in automating factory electricity consumption predictions, contributing to improving accuracy and potentially saving an estimated average of €5 million per month in green power procurement costs.
- Recognized by supervisors in the final presentation and invited to return after the internship.

Statistical Consulting Center @NCKU   Tainan, Taiwan
Statistical Consulting Assistant   Sep. 2023 – Jun. 2024

- Delivered statistical consulting services to students and professionals, guiding analysis direction, interpreting statistical results, and providing programming support.
- Assisted the center in undertaking projects, including data analysis on hospital medication and school surveys.

Department of Statistics / Department of Computer Science @NCKU   Tainan, Taiwan
Teaching Assistant   Sep. 2023 – Jan. 2025

- Conducted TA sessions for 100+ undergraduate students, introducing data analysis tools to support hands-on learning. Supported three courses across CS and Statistics courses.

Skills

- **Technical:** Statistical Methods, Advanced Statistical Modeling, Machine Learning, Deep Learning, Graph Neural Networks, Generative AI, Explainable AI
- **Programming:** Python, R, SAS, MSSQL
- **Languages:** English (IELTS 7.0), Mandarin, Taiwanese

Publication

Liang-Jen Huang and Cheng-Te Li. "Partial Data, Potential Exposure: Evaluating Privacy Leakage via GNNExplainer on Social Networks." *IEEE International Conference on Consumer Electronics – Taiwan (ICCE-TW)*, Taichung, Taiwan, July 9-11, 2024. **Best Paper Honorable Mention**.

Projects

Survival Analysis of Lung Cancer Patients in Sweden ⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀ Jan. 2026

- Built Cox proportional hazards models to study how different treatments and patient characteristics influence lung cancer survival over time, while accounting for censored observations.
- Tech: SAS, Survival Analysis, Cox Proportional Hazards, Kaplan–Meier

From Browsing to Buying: A Bayesian Study of Online Shoppers ⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀ Nov. 2025

- Applied Bayesian approaches to address the online purchase intention problem, quantifying uncertainty and identifying differences across user groups and visit patterns to inform e-commerce marketing decisions.
- Tech: R, Stan, MCMC, Bayesian Logistic Regression, Hierarchical Bayesian Modeling

From Explanation to Selection: GNN Explainers are Data Quality Filters ⠀⠀⠀⠀⠀⠀ July. 2025

- Used graph explainability methods to identify critical data, providing insights for prioritizing valuable information and detecting privacy-prone areas requiring stronger protection.
- Tech: Python, PyTorch, PyG, GNNExplainer, CF-GNNExplainer, GCN, Social Network Analysis

Multimodal Pathological Voice Classification ⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀ Jan. 2025

- Addressed a multimodal problem by combining medical history data and voice signals to classify pathological voice conditions.
- Tech: Python, Wav2Vec, PCA, MCA, Logistic, SVM, XGBoost, LightGBM

Rescue the Acne Face ⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀ Jun. 2024

- Developed a deep learning-based automatic acne removal system by comparing two-stage detection-inpainting approaches with one-stage clean face generation methods.
- Tech: Python, PyTorch, OpenCV, YOLOv8, Inpainting, Pix2Pix, CycleGAN

Exploring Multifaceted Factors in Housing Price Prediction – Taipei City ⠀⠀⠀⠀⠀ Dec. 2023

- Applied statistics and machine learning to analyze the impact of three key factors: real estate information, local amenities, and economic conditions on housing prices, and developed prediction models.
- Tech: Python, R, Lasso, PCA, SVM, Random Forest, LightGBM

Emoji Recommendation System Using Classification Models ⠀*(Bachelor Thesis)*⠀⠀ Jun. 2022

- Utilized social media data from web crawling, along with statistical and machine learning methods, to build emoji classification models that match sentences with appropriate emojis reflecting their underlying meaning.
- Tech: Python, R, Word2Vec, TF-IDF, Lasso, SVM, KNN, Naive Bayes, Sentiment Analysis

Popular Chocolate and Cookie Flavor Trends Prediction ⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀⠀ Nov. 2021

- Provided HUNYA FOOD with insights into new snack flavors by analyzing sales and ingredient data, supplemented with public opinion and invoice data, to identify trends and customer preferences.
- Tech Stack: R, Text Mining, PCA, Cluster Analysis, Discriminant Analysis, Chi-squared test, PowerBI

Extracurricular Activities

- **Leadership:** Team Lead, NTPU Baseball Club (2021-22) — Oversaw team operations and finances.
- **Interests:** Hiking, Cooking, Euphonium, Orchestra (Hornboskapen, ongoing); Volleyball — National Statistics Department Champion (2020 & 2022); Baseball — Taiwan Women's Baseball League participant.