

Chia-Hung Kuo

Seattle, WA | kuo.chiahung@icloud.com | [LinkedIn](#) | [Github](#)

Data scientist specializing in machine learning, statistical modeling, and causal inference. Built novel ensemble architectures with significant performance gains on complex prediction problems.

Technical Skills

Programming: Python, SQL, Stata, R

ML & Data Science: scikit-learn, PyTorch, matplotlib, seaborn, XGBoost, pandas, Polars

MLOps & Infrastructure: MLflow, Optuna, Git, Docker, AWS

Data Platforms: PostgreSQL, BigQuery, Redshift, Spark (PySpark)

Projects

Multi-Target Stacking: A Novel Ensemble Framework

2025/9

- Developed novel ensemble framework using multiple auxiliary targets for error decorrelation—57% improvement over traditional stacking (95.6% vs 60.8% PR-AUC), demonstrated on financial time series binary classification (14M+ records, 2011-2025)
- Cross-ETF models trained on multiple targets produce complementary errors; systematic search (MLflow/Optuna) and Signal-to-Noise selection
- Validated across 12 walk-forward folds maintaining stable 95.6 PR-AUC despite distribution shifts
- Tech: Python, Polars, scikit-learn, XGBoost, RandomForest, MLflow, Optuna

Experience

Michigan State University, East Lansing, Michigan

Graduate Researcher & Teaching Assistant

2018/9-2024/6

- Conducted quantitative research using Python, R, and Stata for data analysis, causal inference, and statistical modeling on large-scale surveys (NLSY97, CFPS)
- Applied econometric methods (MLE, IV, DiD) to identify causal relationships; extensive experience with hypothesis testing and robustness validation
- Taught and supported economics courses; Excellence in Teaching Award (2022)

Institute of Labor Economics, Bonn, Germany

Research Assistant

2017/1-2018/7

- Supported IZA/DFID research program funding economic studies in low-income countries; coordinated evaluation process for 100+ proposals
- Facilitated communication with international researchers; synthesized findings into policy briefs for government and academic audiences

Education

PhD Candidate (ABD) in Economics, Michigan State University

2024/6

MSc in Economics, Michigan State University

2020/3

MSc in Economics, University of Bonn, Germany

2018/6

BSc in Quantitative Finance, National Tsing Hua University, Taiwan

2014/6