JITING JIANG

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EDUCATION

Ph.D. in Applied Economics, University of California, Davis (with STEM OPT) Expected 2024
- Visiting Research Member at Stanford Center on China's Economy and Institutions (SCCEI)
- *Coursework: Machine Learning; Econometrics; Advanced Statistics; Causal Inference*

M.S. in Economics, Tufts University 2016 - 2018

B.A. in Applied Economics, Harbin Institute of Technology 2011 - 2015

TECHNICAL SKILLS

Certifications: Coursera Machine Learning Specialization, Correlation One Data Science for All

Programming and Tools: Python (NumPy, Pandas, Matplotlib, Seaborn, SciPy, Statsmodels, Scikit-learn, EconML, TensorFlow), SQL, Stata, LaTeX, R, Julia, Git, Matlab, Tableau, AWS, ArcGIS

Data Science: Data Querying, Data Wrangling, Exploratory Data Analysis, Data Visualization, Feature Engineering, Hyperparameter Tuning, ETL

Statistical Modeling: A/B Testing, Machine Learning (Superived ML, Unsupervised ML, Neural Networks, Double ML), Causal Inference (RCT, FE, Diff-in-Diff, RD, Event Studies, Synthetic Control, Causal Forest)

SELECTED PROJECTS (More details at https://jitingjiang.github.io)

Fraud Detection in Card Transactions using Machine Learning Models
- Utilized ML methods (Logistic Regression, Random Forest, and Gradient Boosting) to predict potential fraud
- Balanced the dataset with SMOTE and addressed duplicate transactions of different types
- Achieved great model performance with a Recall score of 0.982 and an AUC-PR score of 0.993

Mental Health of Primary School Students in a Randomized Control Trial
- Evaluated the causal impact of a large-scale Randomized Control Trial (RCT) on students' mental health
- Applied Causal ML algorithms (Causal Forest) to analyze heterogeneous treatment effects
- Reduced poor mental health rates by about 30%, with a greater impact on baseline disadvantaged students

College Expansion Policies on Well-being using Quasi-experimental Methods
- Employed a difference-in-differences (Diff-in-Diff) strategy with fixed effects to estimate causal impacts
- Used Post-Double Selection LASSO to identify key features for predicting college-going behavior
- Challenged the conventional belief that higher education improves mental well-being

Deep Learning for Customer Churn Prediction using Tensorflow in Python
- Developed and trained Neural Network models with varying complexity to predict customer churn
- Selected the top-performing model and fine-tuned the regularization parameter
- Predicted customer churn patterns effectively with a 93% accuracy rate

Agricultural Productivity Puzzle Investigation with Geographic Database
- Conducted experiments to directly test a long-standing puzzle in agricultural productivity literature
- Created and cleaned a geographic database with GPS field device records using ArcGIS
- Addressed missing string data and validated estimates through Monte Carlo simulations