Yidi (Eddie) WU

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EDUCATION

Brown University **Providence, US**
Ph.D. in Econometrics, supervised by Prof. Toru Kitagawa *Aug 2022 – May 2026 (expected)*

- Coursework in Time Series, Causal Inference, Macro Econometrics, Probability Theory, Stochastic Calculus, Bayesian Inference, Optimization, Machine Learning, Nonparametric Statistics.

Imperial College London **London, UK**
M.Sc. in Computing (AI and Machine Learning) *Sep 2020 – Sep 2021*

- Graduated with Distinction (GPA 4.0/4.0 equiv.) and coursework in Computational Finance, Deep Learning, Reinforcement Learning, Natural Language Processing, Operations Research, and Imaging.
- Worked extensively with PyTorch, TensorFlow, XGBoost, scikit-learn, SciPy, R, and MATLAB.

University of Cambridge **Cambridge, UK**
B.A. (Hons) in Economics *Oct 2017 – Jun 2020*

- Graduated with First-Class Honors (GPA 4.0/4.0 equiv.) and coursework in Statistics and Econometrics.

RELEVANT EXPERIENCE

Brown University **Providence, US**
Ph.D. Candidate (Academic Research) *May 2024 – Present*

- Combined multi-armed bandits and Thompson sampling with random forest and shrinkage estimators such as LASSO regression to do high-dimensional variable selection, attained computational gains via stochastic optimization and improved the accuracy of selecting true variables relative to without bandits by 25%.
- Predicted the counterfactual economic outcomes of the UK without Brexit using synthetic control methods regularized by ridge regression and estimated Brexit to have caused a cumulative drop in real GDP and disposable income by about 10% and 16% respectively over 2016Q3 – 2023Q3.
- Employed and fine-tuned variational autoencoders (VAE) to simulate cross-sectional economic data and generated synthetic data whose marginal distributions highly resemble the real data, aiming to ultimately develop autoregressive generative models to augment time series data in finance and macroeconomics.

Brown University **Providence, US**
Research Assistant *Jun–Sep 2021, Jun–Sep 2022*

- Contributed to an R package on GitHub for the hypothesis testing of causal mechanisms and magnitude of causal effects, and demonstrated the test implications in two empirical applications.
- Constructed a Bayesian conditional mixture model and studied MCMC convergence in MATLAB and Stan.

Institute for Fiscal Studies & University of Cambridge **London, UK**
Research Assistant *Sep 2021 – May 2022*

- Examined a panel data of more than 20,000 Americans collected over 20 years to estimate a longitudinal structural model with simulated method of moments in MATLAB to study how health impacts work.
- Preprocessed and analyzed US census and survey datasets comprising over 10 million observations to study the impact of affirmative action regulation on the share of minority hiring and economic outcomes.

J.P. Morgan **London, UK**
Global Markets Summer Analyst *Jun 2019 – Aug 2019*

- Utilized time series methods including factor models and autoregressions in Python to analyze stock returns, swap rates and the Greeks of stock options to understand growth drivers and risk exposures.
- Built a program for monitoring live intraday Emerging Markets countries' swap rates in Excel VBA and automated the process of pulling data from Bloomberg Terminal.
- Rotated among Equities, Currencies and Emerging Markets rates trading desks to gain insights into trading, pricing, hedging, and risk management of derivatives including futures, swaps, options, and exotics.

ADDITIONAL INFORMATION

Language: English (fluent), Mandarin (fluent), French (basic).

Technical: Python, Machine Learning libraries, R, SQL, MATLAB, Excel (basic in VBA).