Yidi (Eddie) WU

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EDUCATION

Brown University **Providence, US**

Ph.D. in Econometrics and Quantitative Economics *Aug 2022 – Present*

- Completed relevant coursework in Probability Theory, Optimisation and Stochastic Calculus, Real Analysis, Bayesian Inference, Numerical Methods, and Finance.
- Research specialised in the intersection of econometrics and machine learning, with applications to time series forecasting and causal inference.

Imperial College London **London, UK**

M.Sc. in Computing (AI and Machine Learning) *Sep2020 – Sep 2021*

- Graduated with Distinction in all modules: Deep Learning, Reinforcement Learning, Natural Language Processing, Computational Finance, Mathematics, ML for Imaging, Operations Research, and Robotics.
- Extensive experience in using PyTorch, TensorFlow, XGBoost, scikit-learn and other ML tools.

University of Cambridge **Cambridge, UK**

B.A. (Hons) in Economics *Oct 2017 – Jun 2020*

- Graduated with First-Class Honours and ranked top 5 out of 166 in quantitative econometrics.
- Completed dissertation on modelling stock volatility with Markov-Switching models and structural VAR.

RESEARCH

Ph.D. research in progress: **Providence, US**

- *Using semi-supervised machine learning for macroeconomic predictions*:
  My co-author and I experiment with semi-supervised self-training ML models (adapting from Microsoft Research's ASTRA framework) to interpolate and forecast low frequency economic data such as GDP growth and inflation by taking higher frequency data like financial asset prices and interest rates as inputs.
- *Bayesian nonparametric mixture for causal inference*:
  Supervised by Prof. Andriy Norets, we propose a novel Bayesian nonparametric model based on discrete-continuous mixtures to evaluate causal effects, with the aim of generalising the mainstream instrumental variable method to non-linear and non-monotonic causal relationships.

M.Sc. dissertation: **London, UK**

- *Developing machine learning tools to predict eczema severity*:
  I develop and compare Bayesian state space models to predict the evolution of a patient's eczema severity over time and its relation to other covariates, beating the baseline models by a significant margin.

WORK EXPERIENCE

Institute for Fiscal Studies & University of Cambridge **London, UK**

Research Assistant *Sep 2021 – Jun 2022*

- Constructed dynamic structural models in MATLAB to examine the impact of health on employment.
- Used Python extensively to solve text analysis problems like employing TF-IDF for matching.
- Programmed in Stata to implement panel data regression model using matrix-valued covariates, employing techniques such as iterative convergence and grid search for global optima.

J.P. Morgan **London, UK**

Global Markets Summer Analyst *Jun 2019 – Aug 2019*

- Programmed in Excel VBA to build a monitor for live intraday Emerging Market countries' swap rates.
- Analysed the historical delta, gamma, theta and other Greeks of stock options to generate trade ideas and assess risk exposures.
- Rotated across Equities, Currencies and Emerging Market rates desks and gained insights into trading, hedging, pricing and risk management of derivatives such as swaps, options, exotics and hybrids.

ADDITIONAL INFORMATION

Language: English (native), Mandarin (native), French (beginner).

Technical: Pytorch, XGBoost, scikit-learn, MATLAB, R, Excel (basic in VBA), Bloomberg Terminal.