Cameron Fen

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Education:

University of Michigan, Ann Arbor, MI August 2018-Present

- PhD in Economics
- Courses: Microeconomics I-II, Macroeconomics I-IV, Econometrics I-III, Finance I, Structural Estimation in Finance, Asset Pricing, Continuous Time Finance,
- Audited Courses: Deep Learning and Computer Vision, Industrial Organization I-II,

Brandeis University, Waltham, MA Sep 2012-May 2015

- Bachelor of Arts in Economics and Math, Minor in Computer Science
- Courses: Introduction to Big Data, Statistics, Econometrics, Data Structures, Scientific Computing, Macroeconomics/Dynamic Programing, Probability, Fourier Series, Differential Equations

California Institute of Technology, Pasadena, CA Sep 2009-Jun 2010

- Courses include Linear Algebra, Multivariable Calculus, Physics: Mechanics, Physics: Electricity and Magnetism

Experience:

Summer Research Assistant, University of Michigan 2019, 2020
Teaching Assistant, Economics University of Michigan 2019-Present
Research Assistant, Philadelphia Federal Reserve 2016-2018
Teaching Assistant, Economics Brandeis University 2014

Research Interests:

Bayesian Econometrics and Machine Learning, Macroeconomics, Time Series Econometrics, Deep Learning, Finance, Industrial Organization

Works in Progress:

"State-of-the-Art Macroeconomic Forecasts with Recurrent Neural Networks," with Samir Undavia
"Variational Inference and Bayesian DSGE Estimation"
"Fast Simulation-based Maximum Likelihood"
"Data Imputation with Transformers" with Zhengyuan Cui

Skills:

- Python: Scrapy/Beautiful Soup(Web Scraping), Tensorflow and PyTorch(Deep Learning); Matlab; SQL;Java: Hadoop (Distributed Computing); C++; Stata

Abstracts:

State-of-the-Art Macroeconomic Forecasts with Recurrent Neural Networks," with Samir Undavia

We introduce a neural network model along with a data augmentation scheme that consistently outperforms state-of-the-art models. The model provides better forecasts than AR(2), and a dynamic stochastic general equilibrium model over all horizons, a factor model on horizons longer than 2 periods ahead, and the median forecast of the Survey of Professional Forecasters at 5 quarters ahead. Forecasts over different time windows, model specifications, along with Monte Carlo simulation suggests the performance of our model is robust, reproducible, and does not depend significantly on the randomness of the initialization, reasonable changes in architecture, and numerical optimization.