Chunling (Cynthia) Peng

PhD in Economics

Email : cpeng@udel.edu

Mobile : +1-(302)220-3519

PROJECTS

- **Job Market Paper: Hysteresis during "Jobless Recoveries": Evidence from SSDI Program**: This paper studied the "hysteresis" in SSDI (Social Security Disability Insurance) program from 1980 to 2016 by comparing different models using CPS annual data with six million observations. The Social Security Disability Benefits Reform Act of 1984 was used as an exogenous shock to create a unique natural experiment. Using the difference-in-differences with instrumental method and fixed effect, it was shown that demographics, education, marriage, number of children, benefit premium, memebership rule, structural shocks and cyclical shocks and structural shocks are causal to the degree of hysteresis. My findings provide a important implication for the conduct of monetary and fiscal policy.

- **Machine Learning using Python**[1]: Processed dataset using standard machine learning practice (winsorization, normalization, vectorization etc). Trained model using proper bootstrap/oversampling/SMOTE method to detect rare events (such as fraud etc). Trained model with weighted cross entropy loss function to detect rare events. Grid searched for optimal hyperparameters with cross validation. Used various ensemble (random forest/voting classifier etc), gradient boosting (xgboost), stacking model (used data to train another model to stack all trained models) to obtain best performing model.

- **Futures & Options Data Analysis using R[1] & Python[1]**: Automated data pipline of collecting, cleaning and plotting futures and options data from Commitment of Trader report, Created forecasting models and behavior indicators to guide trading. Monitored global macro and financial market event, traded futures by discretionary using quantitative and qualitative analysis (Rational Expectation). Interpreted economic data releases from FOMC, BLS, BEA, ECB and USDA etc., compare internal and consensus estimates (e.g. GDP, CPI).

- **Time Series Modeling using Stata**[1]: Selected proper ARMA models and forecasted U.S. monetary base: applied both standard and seasonal unit root test to decide the order of integration, and forecasted U.S. monetary base. Developed VAR model, and forecasted growth rate of GDP and inflation rate given money supply and government spending.

EXPERIENCE

- **University of Delaware** — Newark, Delaware
  Adjunct Professor, Alfred Lerner College of Business & Economics — *02/19 – present*
  - Lectured 60+ senior undergradtuate students Business Process Analysis class emphasize on Forecasting, Linear Programming, Queuing Models and Simulation.
  - Designed 20+ exams, assignments and projects in modeling, optimization and analysis. Blended modeling techniques together with business insight and process management.
  - Managed all aspects of the course, including course material development, classroom management and discipline enforcement.
  - Effectively used new technologies (CANVAS, blackboard, Zoom, Skype and etc..) to enhance the communication with students.

- **University of Delaware** — Newark, Delaware
  Teaching Assistant, Alfred Lerner College of Business & Economics — *01/15 – 12/18*
  - Coached MBA students in Econ503 Economic Analysis for Business Policy and BUAD820 Fundamentals of Analytics courses focusing on review and discussion sessions.
  - Provided effective assistance to Professor William Latham and Professor Hemant Kher as a TA for MBA students from diverse backgrounds in multiple semesters. Received high evaluation from MBA students.

- **TeenSHARP.org** — Newark, Delaware
  Instructor — *09/18 – 12/18*
  - Lectured and examined senior high school students in Research Method: Quantitative & Qualitative Analysis with R and Excel.

- **Allpku Management Consulting Group** — Chongqing, China
  Consultant — *04/04 – 08/06*
  - Worked closely with clients and partners, Interacted and collaborated with Marketing, Designing and Finance department teams to execute strategies.
  - Designed Multi business line strategy to maximize profit by industry research, competitor analysis, public policy analysis and internal audit.

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[1] Advanced analytical languages.

- ○ Generated value-added initiatives for management tank to increase the efficiency.
- ○ Worked on projects in diversified industry including retail, real estate, energy, printing and etc..; the Systematic Solution to Strategic Integration of the Resource of Unon Group enhances the finance performance in the profit by over 100%.

Skills

- **Economics Research**: Economic Policy Research, Macroeconomics, Behavioral Economics, Health & Labor Economics.

- **Modeling**: Linear Nonlinear Modeling (2SLS/Fixed Effects/Probit/Logit/Tobit/Poisson), Machine Learning with Scikit-learn, Time Series Forecasting (ARIMA/VAR/VECM). Linear &Nonlinear Programming.

- **Programming Languages**: SAS Base/Enterprise Guide/Enterprise Miner (Certified BASE & Advanced Programmer), R, Python, Stata, SQL, R markdown/Jupyter, LaTeX, Excel Solver.

- **Operating System**: Windows, Unix, OS X.

Languages

- **English**: Fluent   **Chinese**: Native

Education

- **University of Delaware**   Newark, DE
  PhD in Applied Econometrics and Quantitative Economics (STEM)   *Exp 2019*

- **University of Cincinnati**   Cincinnati, OH
  Master of Art in Economics

- **Central University of Finance & Economics**   Beijing, CN
  Bachelor of Art

Graduate Coursework

Advanced Econometrics, Panel Data Econometrics, Time Series Forecasting, Advanced Macroeconomics, Advanced Microeconomics, Money and Banking, Statistics, International Economics, Data Mining, Optimization Modeling.