Joseph Leland Bybee

EDUCATION

University of Chicago, Chicago, IL
B.A. Economics, June 2013

University of Michigan, Ann Arbor, MI
M.S. Statistics, May 2017

Yale School of Management, New Haven, CT
Ph.D. Financial Economics, Expected 2024

EXPERIENCE

Research Professional — Booth School of Business, Chicago, IL — June 2017-July 2019

Developing an economic model linking latent text factors and returns. Developing a least squares based optimization procedure for estimating scalable and extensible topic models with a focus on financial time series applications.

Graduate Student Research Assistant — University of Michigan, Ann Arbor, MI — September 2016-May 2017

Analyzed online student interactions for an introductory statistics course to determine the effectiveness of mixed online and in-person methods.

Research Assistant — University of Michigan Law School, Ann Arbor, MI — January 2016-May 2017

Developed a model for forecasting whether New York Police Department (NYPD) officers would receive future complaints and produced a software implementation in use by the Civilian Complaint Review Board for the NYPD. Additionally, developed a procedure for estimating frailty terms in a high dimensional survival model for Michigan traffic offenses.

Student Programmer — Google Summer of Code, Ann Arbor, MI — May 2016-August 2016

Implemented a distributed computing method for the Python package, statsmodels. The method is capable of estimating high dimensional and out-of-memory generalized linear models with regularizing terms.

Graduate Student Instructor — University of Michigan, Ann Arbor, MI — September 2015-May 2016

Taught several lab sections for the introductory statistics course, STATS 250.

Research Professional — Fama-Miller Center, Chicago, IL — June 2012-August 2015

Worked with a number of Booth School of Business finance faculty to assist with research projects.

PUBLICATIONS

L. Bybee and Y. Atchadé. A Scalable Algorithm for Gaussian Graphical Models with Change-points. Accepted with minor revisions to the *Journal of Machine Learning Research*.

RESEARCH INTERESTS

Text data, machine learning, econometrics, asset pricing, Bayesian methods, graphical models, high dimensional and computationally challenging problems

SKILLS

Python (numpy, pandas, matplotlib, statsmodels, dask), R, C++, Matlab, ArcGIS