# **Stephen M. Lee**

https://stephenlee.info

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# **Education**

### **University of Chicago:** *Chicago, IL*

* M.B.A Class in Competitive Strategy **Winter 2019**

### **University of Memphis:** *Memphis, TN*

* M.S. Computer Science **Winter 2019**
* M.A. Economics **2018**
* B.S. Physics **2013**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# **Skills**

### **Computer Programming**

* *Data Science*  R (tidyverse), Python (pandas, numpy, and keras), MATLAB, STATA, eViews.
* *Econometrics* Causal inference, Discrete choice, Fixed and random effects, Probit/logit, ARMA, VAR.
* *NLP*  LDA, LSTM neural networks with GloVe embeddings, Multinomial inverse regression.
* *Machine Learning* Neural networks, Decision trees, Clustering, Recommendation systems.
* *Web Development*  Django REST Framework (Python), Angular 8 (Typescript), Bootstrap (CSS / HTML).
* *Other Tools* SQL, AWS, OSX, Windows 10, Linux (Debian), Bash scripts, Docker.

### **Teamwork**

* *Project Management* Agile; Git version control; Test driven development; Experience with distributed teams.
* *Public Speaking* Conference and workshop presentations, with and without PowerPoint.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# **Employment**

**Federal Reserve Bank of Chicago:** *Research, Finance Department* **2019 – Current**

* I co-author the Finance memo used to brief the bank President before each FOMC meeting.
* Main research focus is on interest rate pricing of bank loans using confidential Y14 bank reporting data, and the effects of the announced corporate credit facilities in response to COVID-19.

**University of Memphis:** Research Assistant, Economics and CS Departments **2016 – 2019**

**Fanatics Apparel**: *Planner* **2015 – 2016**

**Professional Golf** **2013 – 2015**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# **Select Projects**

**Information in Public FOMC Speeches:** ([link to paper](https://stephenlee.info/Papers/StephenLee_FOMC_Speeches.pdf))

* Can we predict Federal Open Market Committee (FOMC) interest rate changes based on public speeches?
* I webscraped public speeches from members of the Federal Reserve Board of Governors.
* I performed a text analysis using latent Dirichlet allocation and LASSO penalized regression.
* Using only text data from speeches given between meetings, I found that you can in fact make a better than random guess about future interest rate changes.

**Loss Aversion in Experts: Evidence from the PGA Tour:** ([link to paper](https://stephenlee.info/Papers/StephenLee_PGALossAversion.pdf))

* Do golfers display loss aversion when they’re near the “cut” line?
* Exploiting the fact that making the cut means you make money, while missing the cut means you leave with zero, I use a regression discontinuity design to find evidence supporting the hypothesis that golfers “inside the cutline” play a less risky strategy than the players “outside the cutline”.