Patrick Lam

pkphlam@gmail.com
http://www.patricklam.org

EXPERIENCE

Facebook - *Research Scientist (Core Data Science)*

OCTOBER 2019 - PRESENT

- Working in the Computational Social Science group within Facebook's Core Data Science team as a research/data scientist applying observational causal inference and machine learning methods to computational social science problems.

Thresher - *Lead Data Scientist and Co-Founder*

JULY 2015 - JUNE 2019

- Developed and coded the Thresher QuickCode algorithm that used machine learning to recommend labeling rules for labeling training data in text.
- Managed as Principal Investigator multiple DARPA-funded projects on big data, social media manipulation, and the spread of information.
- Wrote Python code for a range of tasks including downloading data from APIs, scraping web data, processing text data in multiple languages with NLP methods, indexing, querying, and aggregating data in Elasticsearch, and applying supervised and unsupervised machine learning models.
- Worked with analysts to create data visualizations and tools to develop insights from data.

Minerva Schools at KGI - *Assistant Professor of Computational Science (part-time)*

AUGUST 2018 - JULY 2019

- Led tutorials on "Causality and Common Sense Reasoning in Machine Learning" and "Computational Data Analysis and Modeling in Social Sciences."

Statistical Consulting

MAY 2012 - PRESENT

- Retained by preeminent international law firm as a core team member performing expert data analysis as part of a high-stakes nationwide litigation.
- Retained by the Australian Council of Trade Unions to perform data analytics and field experiments for the 2013 Australian Federal Election.
- Retained by the International Finance Corporation to perform midterm evaluation for the IFC SME Finance Initiative and program evaluation on various other IFC projects.
- Retained by the Australian Conservation Foundation to perform campaign canvassing field experiments.

PUBLICATIONS

- King, Gary, Patrick Lam, and Margaret E. Roberts. 2017. "Computer-Assisted Keyword and Document Set Discovery from Unstructured Text." *American Journal of Political Science* 61 (4): 971-988

EDUCATION

Harvard University - *Ph.D. in Political Science*

NOVEMBER 2013

- Dissertation: Estimating Individual Causal Effects
- Committee: Gary King (chair), James Alt, Adam Glynn, Arthur Spirling

Harvard University - *A.M. in Statistics (Masters)*

MARCH 2013

University of California, Los Angeles - *B.A. in Political Science*

JUNE 2006

INVITED TALKS

- "QuickCode: Label your Training Data Fast and Transparently." *PAPIs*, Boston, October 17, 2018
- *15th National Security Seminar*, Singapore, October 17, 2017
- *Computational Simulation of Online Social Behavior (SocialSim)*, Defense Advanced Research Projects Agency, October 11, 2017 and July 17, 2018.
- "National Security & Intelligence Applications of Text Analytics." *Topics in Cyber Security and the Internet*, University of Central Florida, March 26, 2015.
- "Computer-Assisted Keyword and Document Set Discovery from Unstructured Text." *31st Annual Meeting of the Society for Political Methodology*, University of Georgia, July 24, 2014.

TEACHING

Minerva Schools at KGI - *Assistant Professor*

FALL 2018 - SPRING 2019

- Professor for undergrad tutorial on Causality and Common Sense Reasoning in Machine Learning, which covers approaches to causality and reasoning from statistical and AI perspectives.
- Professor for undergrad tutorials on Computational Data Analysis and Modeling in Social Sciences.

Harvard University - *Instructor and Teaching Fellow*

FALL 2008 - SPRING 2011

- Instructor for an informal graduate course I designed that covered topics in Bayesian statistics (conjugacy, hierarchical models, Markov Chain Monte Carlo methods, convergence, and model checking) using R. I was also previously a TF for a similar graduate course.
- Instructor and TF for a graduate math refresher for incoming graduate political science students that covered calculus, probability, and R.
- TF for a graduate level course on advanced topics in political methodology (generalized linear models, causal inference, matching methods, missing data imputation) using R.
- TF for an undergraduate introductory level course on basic statistical analysis using SPSS.

Massachusetts Institute of Technology - *Teaching Assistant*

FALL 2011

- TA for a graduate course on linear regression and causal inference using R and Stata.

SKILLS

- **Languages/Tools**: Python, R, Elasticsearch, SQL, Git
- **Statistical Expertise**: causal inference in observational data, Bayesian statistics, supervised and unsupervised machine learning, text analysis, missing data methods