Sookyo Jeong

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Education

Stanford University, *PhD in Economics*   2016-2021 (expected)
Advisors: Mark G. Duggan, Caroline M. Hoxby
- **Coursework:** Machine Learning (CS229), Machine Learning for Causal Inference, Quantitative Methods for Empirical Research, Econometrics, Public Economics, CS106A/B.
- **Research Interests:** Causal Inference, Public Policy, Semi-parametric Methods.
- **Teaching:** Introduction to Statistical Methods, Economics of Health and Medical Care

Wellesley College, *BA in Economics*   2014
Magna Cum Laude, Honors in Economics

Research

Estimating Causal Effect of Air Pollution on Academic Performance
I analyze causal effect of air pollution on academic performances of Korean elementary/middle/high school students in 2009-2016 using an instrumental variable approach. Exploiting unique geography of Korea where pollution matters from China exogenously vary depending on wind direction, I use wind direction as source of variation to evaluate causal effect of air pollution. I find that pollution matters increase the share of underperforming students and decrease share of overperforming students at a statistically significant level.

Causal Inference Under Covariate Shift via Worst-case Subpopulation Treatment Effects
with Hongseok Namkoong (in progress)
Datasets in medicine, economics, and tech, severely lack diversity, and minority groups are often heavily underrepresented. However, standard causal approaches that estimate the average treatment effect are not effective under such biases. We propose a worst-case subpopulation treatment effect, and develops estimators that guarantee uniformly good performance across all subpopulations of a given size.

The Effect of Delayed Retirement Credit on Social Security Claiming and Employment
with Mark Duggan, Irena Dushi, and Gina Li (in progress)
We investigate the effect of changes in the delayed retirement credit (DRC) on workers' decisions to claim retired-worker benefits. We use micro-level Social Security Administration data to quanitify the effect on social security claiming, and its interaction with labor market participation.

Employment

Stanford Economics, Research Assistant   2017-2018
- Estimated labor market effect of social insurance created by family ties using instrumental variable approach
- Analyzed a data set of more than 10 million Swedes, including demographic, labor market, and pharmaceutical information from 1985-2013

MIT Economics, Research Assistant   2015-2016
- Managed a randomized control trial studying the effect of full college tuition scholarship on academic achievement of students attending post secondary institutions in Nebraska
- Applied semi-parametric statistical methods to estimate causal effect of the scholarship

National Bureau of Economic Research, Research Assistant   2013-2015
- Applied diff-in-diff approach to estimate causal effect of rent decontrol in Cambridge, MA in 1996
- Implemented geographic spillover effects, using Stata, MATLAB, and ArcGIS
- Acquited and cleaned data on crime and city budget from the Cambridge Police Department

Programming languages

Python, SQL, Stata, R, MATLAB, C++, Java