Rafeh Qureshi

Data Scientist, Consultant

rafehq.github.io | rafehq | li-rafehq | rafehq@uchicago.edu | 2402749701

Overview Experience

- 10+ years conducting Econometrics and Public Policy Research
- 6+ Experience with Machine Learning and Statistical Modelling, including time series and financial modelling
- Experience with Data Analysis, Mining, Cleaning and Presentation

Experience

CENTER FOR THE ECONOMICS OF HUMAN DEVELOPMENT, UCHICAGO

Senior Researcher **Mar 2021 – Current** | Chicago, IL

Research Specialist **Sep 2018 – Current** | Chicago, IL

- Coauthor on papers regarding economic mobility using frontier methods in nonparametric statistics and machine learning, currently under review at top journals in Economics
- Analyzed large administrative data (10TB+) with panel & time series methods
- Organized and presented research for grants of $1M

COASE SANDOR INSTITUTE, UCHICAGO LAW SCHOOL

Research Professional **July 2016 – March 2018** | Chicago, IL

- Spearheaded projects in a variety of fields for Tax Policy, Health Economics, Law & Economics and Crime, published in top peer reviewed journals
- Scraped, cleaned and gathered data from publicly available data to create databases for future researchers

UNIVERSITY OF VIRGINIA

Research Assistant **Dec 2013 – March 2019** | Charlottesville, VA

- Conducted mathematical analyses and programming in projects in Education Policy and Financing of Student loans in multi-school collaboration across UVa, Stanford and Harvard Economics Departments

Projects

RELATION OF ECONOMIC TIME SERIES ACROSS GENERATIONS |2019-2022

- Analyzed and decomposed economic time series for 200 million+ observations
- Use clustering and penalization methods for dimension reduction
- Used machine learning methods (random forest, CNNs and GNNs) for predicting continuous inputs in to fitted model

OPTIMAL SOLUTION FOR GENERATIONAL TRANSFERS |2021-2022

- Created large scale Dynamic Program for Continuous and Discrete Transfers
- Calibrated to fit moments in Denmark, and estimated parameters for Policy
- Used Mixed Integer Linear Programming and Optimization methods to solve for the optimal discrete and continuous transfers across generations

ANALYSIS OF CRIME |2016-2018

- Scraped and combined large proprietary and public datasets on crime, income and demographic characteristics
- Estimated effects of policies using exogenous variation in policy

Skills

PROGRAMMING

Expert:
R • Python • Stata • SQL • LaTeX • Git

Experienced:
C++/Rcpp • MatLab • Fortran

Familiar:
Julia • AWS • HTML • CSS

LIBRARIES/FRAMEWORKS

data.table, shiny, caret, dplyr, lme4
LAPACK • Armadillo •
pandas, scipy, numpy, tableau,
tensorflow, PyTorch, Keras, PyMC

Education

UNIVERSITY OF CHICAGO, MAPSS

Sep 2019 - Mar 2020| Chicago, IL
Master's in Economics/Econometrics
Thesis: Income Dynamics and Their Heterogeneity

Sep 2017 - Mar 2018| Chicago, IL
GSAL Program, Economics

UNIVERSITY OF VIRGINIA

Echol's Scholar

Sep 2013 - Jun 2016| Charlottesville, VA
Bachelor's in Economics and Mathematics

References

James Heckman,Nobel Laureate, Henry Shultz Professor at UChicago
jjh.assistant@gmail.com

Steven Durlauf, Steans Professor at UChicago, HCEO Director
sdurlauf@uchicago.edu

William Hubbard, Professor at UChicago School of Law
whhubbar@uchicago.edu

Relevant Coursework

GRADUATE

Econometric Methods • Numerical Analysis • Nonparametric Statistics • Machine Learning • MCMC Methods • State Space Methods • Time Series Modeling • Bayesian Analysis