

Zagreb Mukerjee

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EDUCATION

Harvard University Non-degree student: international relations, econometrics, pol. sci. methods.	Cambridge, MA Jan. 2021 – Present
Harvard University AB in Applied Mathematics/Economics.	Cambridge, MA Sep. 2009 – May 2013
SUNY Albany Non-degree High School Student.	Albany, NY Sep. 2008 – May 2009

EXPERIENCE AND MAJOR PROJECTS

Research Data Scientist Prof. Gary King, Harvard Institute for Quantitative Social Sciences	2018 – Present Cambridge, MA
<ul style="list-style-type: none">• Worked as a largely independent research assistant for Prof. King• Gained exposure to a variety of social science topics: social media analysis, right-wing speech, public health• Built on expertise with social science methods: network analysis, econometrics, probability theory, MLE• Used R, RShiny, Python, and SQL for data formatting, analysis and preparation. Extensive scientific writing.	
<i>2k1 In Silico</i> Companion app for intro graduate methods class	Jun 2021 – Present
<ul style="list-style-type: none">• Built an app to demonstrate the fundamentals of probability distributions, maximum likelihood estimation, Bayesian inference, hypothesis testing, and statistical simulation	
<i>Silver Lining Project</i> Effort to extract usable data from the dark web	Mar 2020 – Present
<ul style="list-style-type: none">• Created the first ever academic installation of SecureDrop• Procured new dataset of drug prices scraped from dark net markets• Examining the extent to which drug market movements can explain "deaths of despair"	
<i>Gab and Parler</i> Examination of right-wing social media	Jan 2021 – Present
<ul style="list-style-type: none">• Used R, SQL, parallel computing to construct a novel dataset of 80 million posts (>100 GB) scraped from Gab and Parler• Applied network analysis methods to develop metrics of influential users and model (dis)information flow	
<i>CovidU</i> Model of Covid-19 transmission on college campuses	Jun 2020 – Dec 2020
<ul style="list-style-type: none">• Built a compartmental model of Covid-19 transmission on college campuses for Harvard Covid-19 Committee• Presented model findings and extensions in working paper	
<i>Social Science One</i> Industry-academic partnership for sharing Facebook data	May 2018 – Feb 2021
<ul style="list-style-type: none">• Piloted new model for industry-academic partnerships, resulting in an unprecedented dataset of all URLs shared on Facebook (>40 trillion numbers)	
Investment Associate Bridgewater Associates (macroeconomic hedge fund)	2013 – 2018 Westport, CT
<ul style="list-style-type: none">• Worked as an analyst, individual contributor, and team leader• Developed extensive knowledge of macroeconomics, economic policy, and market structure• Used a variety of statistical methods: PCA, difference-in-differences, regressions• Gained skills in R, Python, Excel; technical writing, project planning	
<i>Stock Market Slicer</i> A causal attribution of stock market returns	Jan 2017-Mar 2018
<ul style="list-style-type: none">• Independently designed and executed research; presented findings in research paper• Broke stock market returns into returns attributable to macroeconomic factors (eg. inflation, housing prices, currency market)	
<i>Market Impact Estimation</i> An assessment of the effect of large trades on prices	Jun 2015 – Dec 2016
<ul style="list-style-type: none">• Used fixed effects and time-series analysis in R and Matlab to estimate market impact of large transactions	

Trading Intern

IMC Chicago

Summer 2012

Chicago, IL

- Used Python to build a k -means clustering algorithm to find aberrant outputs of trading algorithm

Co-Founder and Researcher

AZ (research tools project)

2011-2013

Cambridge, MA

- Secured \$100,000 in funding and built a platform for non-technical social scientists to design and run online experiments on Mechanical Turk and other platforms

Course Assistant

Prof. Edward Glaeser, Harvard University

2011-2013

Cambridge, MA

- Worked as CA and head CA for Econ 1011a, honors microeconomics

Research Assistant

Prof. Richard Freeman, National Bureau of Economics Research

2010-2012

Cambridge, MA

- Worked as an undergraduate RA on projects in labor economics and scientometrics

WORKING PAPERS

Zagreb Mukerjee. CovidU: A model of Covid-19 transmission on college campuses. Working paper, 2020

TECHNICAL SKILLS

Programming/Software: R (inc. Shiny), Python (inc. Pandas, NumPy, Matplotlib), VBA, SQL, HTML/CSS; Excel, Stata, Bloomberg

Experience in very large datasets (>100Gb), parallel computing, cloud computing, Mechanical Turk, survey design