

Shilpi Mukherjee

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Summary of Qualifications

- Proficient in econometric analysis and working with big data using statistical packages/ programming languages such as R, Python, MATLAB, STATA, SQL
- Proficient in causal inference methods such as RCT, Dif-in-Dif, RDD, IV and others.
- Trained in game theoretic analysis and theoretical model building.
- Skilled at implementing machine learning models with focus on NLP.
- Proficient in designing experiments and implementing them through Qualtrics.

EDUCATION

Clemson University, Clemson, SC Expected May, 2021
Ph.D in Economics
Fields : Public Economics, Econometrics, Labor Economics, Machine Learning, Behavioral Economics, Experimental Economics, Game Theory, Computational Social Science.
Recipient of "Hugh H. Macaulay Award" for "Outstanding Graduate Student".
Selected for the 7th Lindau Nobel Laureate Meetings in Economic Sciences.
Recipient of Oskar Morgenstern Fellowship for the 2020-21 academic year.

University of Calcutta, Kolkata, India 2016
M.Phil in Economics
Fields : Institutional Economics, Economics of Information
Received the highest score in M.Phil coursework.

University of Calcutta, Kolkata, India 2014
MSc. in Economics
Fields : Game Theory, Political Economy, Applied Econometrics
Received the First class First prize in a cohort of 220 students.

Presidency College, Kolkata, India 2012
BSc. in Economics
Minors : Mathematics, Political Science
Received the first prize in a national level paper presentation conference, organized by Centre for Development Studies.

WORKING PAPERS

“High Frequency elite political polarization in U.S House of Representatives: Evidence from Twitter Data” (**Job Market Paper**)
Abstract: In this paper I study the short run political polarization between Republican and Democrat politicians in the House of Representatives before and after the November 2018 midterm election, using Twitter data. I compute various metrics of ideological polarization at weekly intervals using methods such as hashtag analysis, topic modelling, Bayesian Ideal Point Estimation, mention and retweet network analysis. I empirically check for the trends in political polarization during the election cycle at the level of discourse. Different measures of polarization signal different trends in polarization. When polarization is measured by hashtag divergence or topical divergence, it seems to increase as the election approaches. But when polarization is measured by Jaccard divergence, sentiment-augmented topic divergence, or cited-media ideology divergence, it seems to decrease as the election approaches. This pattern is consistent with a divergence in preferred electoral agenda but convergence in agenda-item-specific positioning.

“Decrease in Knowledge Makes You More Certain: Evidence from an Experiment” with Prof. Subrato Banerjee, *Queensland University of Technology, Australia*(under referee review in Management Science)

“Political polarization in the 2019 Indian Lok Sabha Elections”

“Incentive Mechanism behind writing online reviews” with Prof. Sukanta Bhattacharya and Prof. Anirban Mukherje, *University of Calcutta, India*

WORK IN PROGRESS

“Understanding Fake News Visibility in India through fact-Checked News”

“Impact of Political Competition on Socio-Economic Outcomes in India” with Sagnik Das, *City University of New York, USA*

“Breaking the Echo chamber effect through media trades” with Prof. Daniel F.Stone, *Bowdoin University, USA*

“Mapping the creation of out group bias” with Prof. Oriana Rachel Aragon, *Clemson University, USA*

DATA SCIENCE/ML PROJECTS

CharityML-Donors-Project

Helping CharityML, a non-profit classify whether individuals earn more than or less than 50K so that they can target their campaign strategies for donations.

Career-Accelerator-Program

Helping a career accelerator program predict whether their fellows will get jobs and what will be duration of job search.

Image Classifier Project

Python application to train an image on a dataset and then use the trained model to predict images.

RESEARCH and PROFESSIONAL EXPERIENCE

Clemson University - USA

2019

Research Assistant to Prof. Patrick Warren

- Performed counterfactual analysis of troll behaviour by comparing them with controls to identify the strategies used by the Russian trolls in order to manipulate the US election.

National Bureau of Economic Research - USA

2018

Research Assistant to Prof. Christy Zhou

- Estimated the effect of airport upgrade on time saving, and evaluated the network effect on air traffic congestion. The analysis involved cleaning air traffic data, merging data, and performing preliminary analysis of time and across airports.

Center for Policy Research - New Delhi, India

2015-2016

Research Assistant in the project entitled “Intermediate Public Transport”

- Conducted field surveys, interviewed auto rickshaw drivers and other stakeholders to document and understand the role of intermediate transport in maintaining efficiency of transportation in , West Bengal.

Indian Statistical Institute & University of Sweden - New Delhi, India

2015

Research Assistant in the project entitled “Persistence of Dowry in West Bengal”

- Supervised field surveys in six districts of West Bengal, with each district having 40 villages. Updated the survey design from the pilot stage to account for the fixed effects of the districts as well as improved the questionnaire and trained surveyors to reduce enumerator bias.

Delhi School of Economics & World Bank - New Delhi, India

2012-2013

On-Field Statistical Investigator in the project entitled “Multi Dimensional Poverty Index”

- Performed slum surveys in Kolkata and suburban areas to create a “Multi-Dimensional Poverty Index for a World Bank project.

Re-emerging World - Kolkata, India **2013**
Summer Intern in the project entitled "West Bengal as an investment destination"

- Headed a project to convey the importance of West Bengal as a potential investment destination to investors. Interviewed government and private stakeholders as well as analyzed observational data to make a compelling case for investment in West Bengal identifying key areas where investment would yield a higher return.

TEACHING EXPERIENCE **Clemson University - USA** **2019 - Present**
Graduate Instructor of Record for 'Principles of Microeconomics'

- Teach 'Principles of Microeconomics' to undergraduate students. Taught approximately 200 students.

Clemson University - USA **2017 - 2018**
Teaching Assistant

- Served as a TA for 'Principles of Microeconomics' and 'Principles of Macroeconomics' class, designed lecture material, graded course work, and ran discussion sessions.

Adamas University, Kolkata, India **2016**
Visiting Faculty

- Taught Economic Environment of Business and Principles of Macroeconomics to graduate and undergraduate students respectively.

PUBLICATIONS **The Impact of Inefficient Institution on Health in India** **2011**
 Theories and Empirics of Economics in the Current Perspective,
 ISBN: 978-81-8424-677-3 pages 106-124.

RESEARCH PRESENTATION Eastern Economic Association Conference 2020
 Clemson University Public Economics Workshop 2019-2020
 Clemson University Industrial Organization Workshop 2019-2020
 INFORMS Conference, Seattle 2019

INVITED TALKS Radio Sofia (Doctoral Lab of Indian Institute of Management, Calcutta) on "Machine Learning and Economics" 2020

CONFERENCES ATTENDED Conference on Transportation, Economics, Energy, and the Environment, 2018
 University of Michigan
 Indian Statistical Institute Summer School 2016

AWARDS or FELLOWSHIPS M.S Wallace Fellowship, Clemson University 2020-2021
 Berletsmann Fellow of Data Science, Udacity 2019-2020
 Graduate Assistance, Clemson University 2016-Present
 Professional Enrichment Grant, Clemson University x3 2019
 J.T Warner Fellow in Economics, Clemson University 2019
 Alfred P. Sloan Foundation Travel Grant 2018
 M.Phil Research Fellow Stipend, University Grants Commission, India 2014-2015
 Qualified the National Eligibility Test (NET) for Assistant Professorship 2014
 conducted by University Grants Commission, India.

CERTIFICATIONS

- **The Data Scientist's Toolbox** by John Hopkins University, *Coursera*
- **R Programming** by John Hopkin's University, *Coursera*
- **Introduction to Data Science in Python** by University of Michigan, *Coursera*
- **NLTK : Build Document Classifier and Spell Checker with Python**, *Coursera*
- **Intro to Time Series Analysis in R**, *Coursera*
- **AI For Everyone** by deeplearning.ai, *Coursera*

- *0.SolveX: Business and Impact Planning for Social Enterprises* by MITx, edX

**TECHNICAL
SKILLS**

Languages : Python(Proficient), Java(basic)

Statistical Packages : R, Stata, MATLAB, EViews

Tools/Framework : Git, GitHub, Gephi, Latex, Palmetto Cluster

OS : Microsoft Office Suite, Linux(basic)

**VOLUNTEER
WORK**

- Delivered a talk on Indian Culture to middle school students in Clemson organized by the Youth Learning Institute.
- Taught underprivileged kids in India to decrease the learning gap.
- Worked as blogger on a pro-bono basis for the official website built by the Government of West Bengal to further the brand image of Bengal.