Ujjayini Das

PhD Candidate, Joint Program in Survey Methodology and Data Science

University of Maryland, College Park

Research Experience

06/2025 - current

Assessment Science and Psychometrics Intern at *National Board of Medical Examiners (NBME)*

Assessing Teamwork in Internal Medicine Residency Training

In this internship I am developing and administering a web-survey to validate a framework of teamwork assessment developed by NBME researchers. The job includes drafting sampling strategy, designing and programming survey questions, analyzing data and disseminating results to non-technical audience.

Skills: Statistical modeling, database preparation, data management and manipulation (MS Excel), questionnaire designing in Survey Monkey, data analysis in R.

03/2025 - current

Graduate Research Assistant at *Joint Program in Survey Methodology*
University of Maryland, College Park, USA and **University of Maryland, Baltimore, USA**

Youth Reach Project

Supervisors: Dr. Jay Unick and Dr. Partha Lahiri

In this research project I am trying to identify homeless youth in Maryland who fail to enroll in the state support programs. Currently, I am working on statistical matching of different public use datasets (school enrollment data from department of education, McKinney Vento data from counties and the HUD point-in-time count data) to compare the demographic composition of youths covered by these data sets. I will then compare the demographic distributions with those in the Homeless Management Information System (HMIS) to identify the gaps in the youth homeless population accepting service.

Skills: Statistical matching, database preparation, data management and manipulation (MS Excel), ANOVA.

08/2023 - current

Graduate Research Assistant at *Joint Program in Survey Methodology*
University of Maryland, College Park, USA

Rethinking Race of Interviewer Effects over Time

Supervisor: Dr. Stanley Presser

In this research project I investigate how the race of interviewer effect (ROI) has evolved over time. I am currently doing a meta analysis of 42 papers published over 1942 - 2018 to answer various research questions including examining temporal pattern of ROI effects. As part of this project, I also analyzed complex survey data involving survey weights and stratification constraints.

Skills: Literature review, database preparation, advanced statistical modeling (multilevel modeling in R and Stata, cross-classified random effects model), inferential statistics (testing for hypotheses, producing robust standard errors), data management and manipulation (MS Excel)

08/2023 - current

Research Assistant at *Robert H. Smith Business School*
University of Maryland, College Park, USA

Measuring Impact of AI in US Federal Agencies

Supervisor: Dr. Tejwansh Anand

This research project aims to produce AI impact index based on how AI has influenced the US Federal employees. Here I did questionnaire designing, drafting sampling plan for the survey and proposing index development. I developed PoweBI dashboards for web-scrapped data. Next I will perform data integration of probability and non-probability samples for analyzing the survey data.

Skills: Drawing up sampling strategy (convenience sampling, snowballing), questionnaire designing (cognitive interviews, pretest using Qualtrics), simulation

09/2022 - 08/2023

Graduate Research Assistant at *Joint Program in Survey Methodology*
University of Maryland, College Park, USA

BSOS Cloud-based Learning Environment

Supervisor: Dr. Brian Kim

The research project aims to create a cloud-based learning environment for students interested in honing skills in R as well as to build a data repository with properly curated datasets in order to help faculties with the teaching procedure inside BSOS. Here I developed interactive web-based tutorials for the cloud platform and served as a data curation mentor to 10 undergraduate fellows.

Skills: R Shiny, GitHub

06/2021 - 02/2022

Research Intern under Dr. Bhaswati Ganguli *Department of Statistics*

University of Calcutta

Research on Comparison of Quality of Life after Trauma between Two Groups of Patients: Limb Salvage vs Amputation

The main objective of the study was to collect primary data from the two group of patients: one having limb salvage and the other having amputation after a traumatic experience. For this purpose, a questionnaire was prepared under supervision of eminent doctors in this field. I performed cognitive interviews for the pilot as well as full-scale telephonic interviews with 60 patients from both groups. I coded and processed the qualitative interview data to create a rectangular dataset ready for analysis.

Skills: Qualitative interviewing, data coding, cleaning and pre-processing in MS Excel and R

07/2021 - 01/2022

Research Intern under **Dr.Dipak Dey** *Department of Statistics*

College of Liberal Arts and Science, University of Connecticut

Model Based Inference on Herd Immunity to Capture Uncertainty

The aim was to develop a model-based inferential method on herd immunity which will capture uncertainties. I proposed a branching Poisson process to approximate the SIR model under closed community to estimate the time dependent basic reproduction number which can give the idea about herd immunity that can further capture the uncertainties and accordingly optimise the vaccination strategy based on that.

Skills: Stochastic modeling theoretical development

06/2021 - 07/2021

Master's Dissertation Research at *Department of Statistics*

University of Calcutta

Impact of Virtual Mode of Education on Mental Health of Students in the Age Group 16-25

Supervisor: Dr. Rahul Bhattacharya and Dr. Arindam Sengupta

The idea of the project was to find any association between the newly introduced online mode of education and the mental health of the students in a particular age group of 16-25 years. Based on the PHQ-9 depression scale and the other possible covariates related to online education that might affect the mental health of the students, I designed a 21 item questionnaire and conducted the web-survey after a pilot. I fit a polytomous regression model(cumulative logit) with different assumptions of proportional and non-proportional odds of the covariates to find the desired association.

Skills: Questionnaire designing, data analysis (polytomous categorical data modeling with R, hypothesis testing)

10/2018 - 11/2018

Field Survey Statistician under **Dr.Natasha Dasgupta** *Department of Statistics*

Lady Brabourne College, University of Calcutta

Measuring the Attitude of Society towards LGBTQ+ Community

The aim of the survey was to gauge the general attitude of society towards the LGBTQ+ community. I administered a 30-item questionnaire and interviewed 15 people in-person who were chosen by venue sampling. I also coded the interview data afterwards.

Skills: Field interview, coding responses, data preparation in MS Excel