

Divij Sinha

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EDUCATION

Harris School of Public Policy, University of Chicago

MS in Computational Analysis and Public Policy - GPA 3.95/4.00

Chicago, Illinois

Expected June 2024

- Siebel Scholar (2024) - Recognized for demonstrating outstanding academic achievement and leadership potential in Computer Science.

Birla Institute of Technology and Science, Pilani

B.E. (Hons) in Electrical and Electronics Engineering; Minor in Politics, Economics, and Philosophy

Goa, India

July 2019

EXPERIENCE

Mansueto Institute for Urban Innovation, Urban Research Corps

Research Engineer

Chicago, Illinois

June 2023 – Present

Used data science and technology in interdisciplinary approaches to create tools and insights for understanding and shaping urban change, towards more sustainable, equitable, and connected cities.

- Engineered a new feature representing homogeneous, contiguous sales environments for the Cook County Assessor's Office, towards enhancing the property tax assessment prediction model.
- Created a tool to generate customizable, public facing property tax explainer for the Cook County Assessor's Office for every Parcel in Cook County.
- Operationalized creation of property tax fairness metrics over the last 10 years in Cook County with Prof. Chris Berry.
- Collaborated with Cornell University on a project using cell-phone pings to study localized segregation.

University of Chicago, Center for Spatial Data Science

Research Assistant

Chicago, Illinois

January 2023 - Present

Collaborated on the Chicago Neighborhoods Project, a crowdsourced reimagining of Chicago's neighborhood map.

- Developed a web application allowing respondents to draw their neighborhoods on an interactive map of Chicago (www.chicago-neighborhoods.com) for over 4,500 respondents with Prof. Emily Talen, Prof. Crystal Bae, and Dr. Lydia Wileden.

Indian Institute for Human Settlements, Urban Informatics Lab

Research Associate

Bangalore, India

September 2019 - August 2022

Implemented data cleaning, analysis, and modeling in Python and R to inform policymaking in the Global South, producing policy briefs and reports on topics like migration, employment, economic development, social protection, and child nutrition. enhanced urban data analysis capacity by designing and teaching courses for over 100 learners, including bureaucrats and Fellows of the Urban Fellows Programme.

- Facilitated collection of primary data from over 12,000 respondents through large-scale surveys across two cities, analyzed findings from the collected data and built models for understanding the realities of domestic and caregiving work for multiple reports commissioned by the International Labour Organization.
- Created national level estimates of district-to-district migration to bridge gaps in publicly available datasets; and predicted future fertility and mortality rates to 2051 for 5-year population projection intervals for age-sex cohorts.
- Produced a confidential district-level risk analysis report in March 2020 for the COVID-19 pandemic exploring the spread potential, the impacts, and the response capacity for the National Disaster Management Agency, Govt. of India.
- Identified the root causes of discrepancies in child health indicators, such as stunting, across Karnataka using DHS data, and presented at an [IFPRI webinar](#) with 200+ attendees, to experts from UNICEF and NITI-Aayog [[Press Release, Govt of India](#)].
- [Wrote multiple policy briefs](#) and analyzed public and confidential government datasets on rethinking urban employment and reframing social security and benefits, and recommendations on the implementation of data systems in the aftermath of the COVID-19 pandemic for the Rajasthan Chief Minister's office.
- Contributed to the migration section for [a report prepared for the XV Finance Commission](#) on the potential of urbanization to accelerate post-COVID economic recovery.

RESEARCH & PUBLICATIONS

- ["Reproducing a Household: Recognising and Assessing Paid and Unpaid Domestic Work in Urban India"](#), International Labour Organization, IHS, 2022
- ["Deficits in Decent Work: Employer Perspectives and Practices on the Quality of Employment in Domestic Work in Urban India"](#), International Labour Organization, IHS, 2022
- ["Employer Practices and Perceptions on Paid Domestic Work: Recruitment, Employment Relationships, and Social Protection"](#), International Labour Organization, IHS, 2022
- ["Predicting Operative Temperature with Machine Learning \(ML\)"](#), IBPSA-England's Building Simulation and Optimisation Conference 2022, University of Bath
- ["Implementing at-scale adaptive thermal comfort controls for mixed mode building using machine learning"](#), Independence and Interdependence of Sustainable Spaces, FARU '22, University of Moratuwa

SKILLS

Programming Languages & Technologies – Python, R, SQL, C, STATA, GIS, Git, Database management

Data Science – Machine Learning, Deep Learning, Web Scraping, Spatial Data & Cluster Analysis, Time Series Analysis

Statistics – Descriptive & Inferential Statistics, Applied Regression Analysis, Econometrics, Microeconomics, Spatial Economics

Research – Experiment & Sampling Design, Survey Data Analysis, Program Evaluation & Analysis, RCT Design & Execution