ASHIRBAD MISHRA

ISB Mohali, Knowledge City, SAS Nagar, Punjab, India

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RESEARCH INTERESTS

Political Economy, Economic History, Development Economics, Exploring: Public Finance, Econometrics

EDUCATION

Indian Institute of Science Education and Research (IISER), Mohali   *Aug 2016 - Nov 2021*
Bachelor of Science (BS) & Master of Science (MS) (Major in Mathematical Sciences)

RESEARCH EXPERIENCE

The Making of Postcolonial Governmentality: Data, Democracy & Development
MS Thesis Research dissertation (Research Paper Manuscript in Preparation)

***Supervisor: Dr Ritajyoti Bandyopadhyay**, IISER Mohali*   Jan-Dec 2021

· This research project tries to study the emergence of the National Sample Survey (NSS) and public data infrastructure in the initial decades of Independent India.
· In particular, we tried to understand the mathematical development of D^2 statistics (from Fischer's C^2 statistics) at the Indian Statistical Institute (ISI) by PC Mahalanobis, which was the knowledge foundation upon which NSS was proposed and carried out. We also ran clustering algorithms (primarily K-Means & KNN) to see if the decisions made from the data collected through NSS in its early days were robust.
· We studied how sampling (D^2) statistics in the form of National Sample Survey (NSS) shaped the aspirations, developmental policies and making of postcolonial Indian state and how this knowledge infrastructure led to the development of data-centric organization of public life.

Personalized news recommender in Python using Machine Learning   Jan-Apr 2020
Instructor: Dr Sarabjot Singh

· Scraped a news corpus, vectorized using word2vec and clustered. Collected implicit user data, vectorized and clustered.
· Designed recommendations for cold user, cold item and clustered units using custom mixed filtering.

Economic History of 18th Century India   May-July 2019
Supervisor: Dr V. Rajesh, IISER Mohali

· Studied various available historiography on the 18th 19th century economic history of India. Briefly studied the papers of Irfan Habib, Muzzafar Alam, CA Bayly, and Prasannan Parthasarathy surrounding the transition from pre-colonial to colonial India.

Random Graphs and Complex Networks   May-July 2018
Supervisor: Dr Nabin Kumar Jena, NISER Bhubaneswar

· Simulated the model social network and tried to understand how different variables affect the degree of different nodes. Also analyzed the measure-theoretic probability aspect of the model, one of them was to identify the type of convergence of the variable in the model.

Real Analysis   May-Jun 2017
Supervisor: Prof S Thangavelu, IISc Bangalore

· Explored the Metric topology & construction of complex numbers, researched on introducing a new topology on $\mathbf{C}^n$.

EMPLOYMENT

Research Associate — Apr 2023-July 2023
Cantre for Analytical Finance, Indian School of Business (ISB), Supervisor: Professor Prasanna Tantri

Assisted in the ongoing research projects and specifically worked on an ongoing impact assessment analysis of the PM-SVANidhi scheme with Ministry of Housing and Urban Affairs, Government of India.

Academic Associate — Jan 2022-Mar 2023
Indian School of Business (ISB)

1. Teaching Assistant for the following courses in Economics, Finance & Statistics for Masters (PGP) students. Prepared solution content for over 10 cases. Conducted tutorials for a few of the following courses for more than 200 students.

- Microeconomics, Time Series Forecasting Analytics, Statistics for Managerial Decision Making, Operation Management, Introduction to FinTech, Infrastructure Finance, Indian Financial Systems, Data Analysis in Finance

INDEPENDENT PROJECTS

Inventory Management Software — Aug-Dec 2018
Independent

Developed a software for inventory management and order placement of stores and warehouses. It could also be used for making P&L statements, credit lines, and balance sheet. The interface was developed using NetBeans IDE in Java and the Database was managed with MySql package.

SKILLS

Programming Language	R, PYTHON, Java(Beginner)
Software	M.S. Office, Stata, NetBeans IDE, LaTeX,MATLAB
Language	English, Odia, Hindi

RELEVANT COURSES (QUANTITATIVE)

IDC201: Theory of Computation	**MTH302: ODE & PDE**
MTH202: Probability and Statistics	**MTH305: Measure Theory**
IDC409: Introduction to Data Science	**MTH402: Functional Analysis**
IDC410: Machine Learning	**MTH435: Stochastic Processes**
MTH302: Analysis in R^n	**MTH413: Advanced Probability**
MTH301: Linear Algebra	**BIO606: Biostatistics**

RELEVANT COURSES (ECONOMIC SCIENCES & SOCIAL SCIENCES)

HSS648: Development Economics: Theory, Policy and Practice	**HSS626 Economic History of Modern India**
Microeconomics-A (PhD course @ ISB)	**HSS638: Ethnographic Research and Writing**
HSS602: Social Theory: Concepts and Debates	**HSS634: Themes in Infrastructure Studies**
HSS202: Philosophy of Science	**HSS627: The Idea of India: Intellectual Imaginary of Nation**

ACHIEVEMENTS

- Recipient of **DST-INSPIRE** fellowship from 2016-21, a flagship scholarship program by Govt of India for undergraduate science students.

- Selected for **Advanced Instructional School on Stochastic Processes** in July 2018 at NISER Bhuabneswar.

- Training Programme in Mathematics Level 2 camp in May - Jun 2016 at NISER, Bhubaneswar

- Secured **3rd rank** in North Zone in **Madhav Math Olympiad-2017** among 20,000 candidates.

- Secured 7th rank in Odisha state in HSC (10th Board) in 2013 among 6 million candidates.

- Qualified Regional Math Olympiad 2012 conducted by HBCSE, TIFR.

CONFERENCES, SEMINARS, & TALKS

- Presented the working Paper "**The emergence of NSS & D^2 statistics**" (co-authored by Prof Ritajyoti Bandyopadhyay, IISER Mohali) at Max Weber Forum for South Asian Studies (MWF Delhi), Max Weber Stiftung, University of Gottingen.

- Presented seminar titled "**Introduction to Axiom of Choice & ZFC**" in the Department of Mathematical Sciences, IISER Mohali, Apr 2018.

- Participated in "**Engaging Science: Conversation Across Disciplines**", Department of HSS, IISER Mohali - Conducted by Indian National Science Academy, Dec 2019.