Aritrabha Majumdar

✉ aritrabhamajumdar.math@gmail.com   ✉ bmat2311@isibang.ac.in   🔗 https://paulpseudoman.github.io

Currently, I am a student at Indian Statistical Institute, Bangalore. I am fascinated by the elegance and beauty of Probability and its application in numerous fields. My topics of interest include Probability Theory, Random Walk, Dynamical Systems, Random Polymers.

Education

B.Math	**Indian Statistical Institute**	July 2023 - April 2026

- Successfully completed fifth semester of studies.
- **Coursework:** Real Analysis, Linear Algebra, Probability Theory, Elementary Number Theory, Numerical Computing, Statistical Inference and Hypothesis Testing, Introduction to Linear Models and Regression, Discrete Mathematics, Group Theory, Ring Theory, Ordinary Differential Equations, Analysis of Several Variables, Introduction to Stochastic Processes, Design and Analysis of Algorithms, Function Spaces.

WBCHSE	**Ramakrishna Mission Vivekananda Vidyamandir, Malda**	2021 - 2023

- Passed WBCHSE with 97%.

WBBSE	**Ramakrishna Mission Vivekananda Vidyamandir, Malda**	2015 - 2021

- Passed WBBSE with 96%.

Achievements

- Successfully Completed three months internship at *Research Commons*   2025
- Selected for INSPIRE - SHE Fellowship   2023
- Qualified IAT with AIR 469.   2023
- Qualified National Science Examination for Chemistry.   2022
- Quallified IOQM 2020.   2020

Experience

- Completed CS50 Introduction to Cybersecurity (Harvard University)
- I mentored students for the upcoming ISI Entrance Examination at Ramakrishna Mission Vivekananda Vidyamandir, Malda during my winter vacation.
- Attended and successfully completed an online course of Advanced Theory in Statistics under Professor Xin Zhao. This course is organised by Beijing Institute of Mathematical Sciences and Application.
- Attended and successfully completed a course of Econometric Modelling and Business Analytics under Professor Jhareswar Maiti and Dr. Sayak Roychowdhury. The course included basics of Hypothesis Testing, Regression Analysis, ANOVA, ANCOVA, analysis of Auto Colinearity, Multicolinearity, Heteroscedasticity etc.
- Completed CS50x (Harvard University)

Skills

Languages	Bengali, English, Hindi, Sanskrit, German
Coding	C, Python, R, LaTeX, OCTAVE/MATLAB
Other Activities	I am a member of the Math Club at ISI Bangalore. The goal of this club is to organize various talks, seminars and lecture series across the year. Besides, I am also the secretary of The Cultural Committee of ISI Bangalore. I was also the *Event Organizer and Manager* and *Member of the tech team* of **CHAOS 2k25**, the annual fest of ISI Bangalore

Talks Given

- **Trapped or Free: Understanding Random Walk Dynamics**   2024
  Math Club, ISI Bangalore

Projects

1. I am currently doing a reading project under the guidance of Professor Rishideep Roy on *Fractal Percolation* and *Stochastic Geometry*.

2. I was one of the mentors of Undergraduate Group Reading Project: Winter 2025, organized by Math club of ISI Bangalore. The tite of the Project was "Exploring Random Walks".

3. I have been selected as one of the research interns at IISER Kolkata. I am doing my research internship under Dr. Amit Ghoshal.

4. I am jointly working on a problem with Sourish Sarkar (ISI Bangalore) under the guidance of Dr. Moutushi Chatterjee (ISI Bangalore) concerning *Detection and Removal of Misinformation from a Statistical Perspective*.

5. Completed a redaing project on *Discrete and Continuous Time Martingale Theory* under Prof. Supriyo Bhar.

6. I was one of the mentors of Undergraduate Group Reading Project: Winter 2024, organized by Math club of ISI Bangalore. The tite of the Project was "Introduction to Dynamical Systems"

Publications

1. S. Sarkar, A. Majumdar, M. Chatterjee, *A New Three-Players Auction Bridge with Dynamic Opponents and Team Members*, https://arxiv.org/pdf/2508.05582

2. S.Sarkar, A. Majumdar, M. Chatterjee, *3 - Players Auction Bridge, Statistical Algorithmic Strategies*,
   http://dx.doi.org/10.2139/ssrn.5517781