

SAYAN DAS

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Education

Jadavpur University

Aug 2023 - July 2027 (expected)

Bachelor of Science in Mathematics with Research

Minors in Statistics and Computer Science

Maths courses: Real Analysis, Linear Algebra, Abstract Algebra, Ring Theory, Numerical Analysis, Metric Space & Differential Geometry, Ordinary Differential Equations.

NPTEL courses: [Algebraic Number Theory](#).

CS courses: Programming Languages, Database Management Systems, Data Structures & Algorithms in Python.

Stats courses: Probability & Descriptive Statistics, Probability Distributions and χ^2 -test.

Research Interests

I am primarily interested in number theory and open to working with both algebraic and analytic tools. Applied and computational problems also interest me, not just in number theory but also statistics, numerical analysis and computer graphics.

Research Experience

Research Internship in Analytic Number Theory

Currently ongoing

Supervisor: [Prof. Dr. Satadal Ganguly](#)

Indian Statistical Institute Kolkata

- Studied analytic number theory from Apostol's *Introduction to Analytic Number Theory*.
- Studied Erdős-Selberg's proof of the Prime Number Theorem.
- Solved all the exercises and typed them up in L^AT_EX.

Volunteering

Content Team Assistant Convenor

Sep 2024 - Present

[Jadavpur Math Society](#)

- Contributed to the Jadavpur Math Society magazine [1] and daily problems list.
- Set the question paper for and helped organise Mathemagician at JU's annual tech-fest Srijan 2025, which included checking and grading answer scripts.

Articles

- [1] S. Das, *Fermat's last theorem for regular primes, A foray into algebraic number theory*, <https://drive.google.com/file/d/1DnhcYP6mPzjeiPHBLC5xtQ1-PP5d9JEr/view?usp=sharing>, 2025.

Projects

Numerical Analysis

Mar 2025 - May 2025

- Implementations of some common numerical algorithms in MATLAB.
- Contains algorithms for linear systems, nonlinear systems, eigenvalues and eigenvectors of a matrix, differential and integral equations.

Achievements

Algebraic Number Theory, NPTEL IISc course topper, achieved the highest score: **71%**.

May 2025

Jadavpur BSc Math Entrance Exam, ranked 49 out of 2600 candidates.

June 2023

Workshops

Winter School on CS Theory

Dec 2024

Indian Institute of Science Bangalore

- One of only 3 students selected to attend the winter school from Jadavpur.
- Attended lectures on matching theory and differential privacy.

Skills

Programming Languages

C, C++, Python, SQL, MATLAB, C#, Java, JavaScript, HTML/CSS

Developer Tools

Make, CMake, Vim, Neovim, Git, PowerBI, VS Code, Visual Studio, IntelliJ, Eclipse, Unity, Unreal

APIs, Frameworks, & Libraries:

Pandas, NumPy, Matplotlib, PyTorch, Tensorflow, Scikit, Boost, SFML, Vulkan

References

1. Prof. Dr. Shamik Ghosh,
Professor, Department of Mathematics, Jadavpur University
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2. Prof. Dr. Subhas Chandra Mandal,
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