

# Soham Chatterjee

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## Education

- **Chennai Mathematical Institute** Chennai, Tamilnadu, India  
*B. Sc - Mathematics and Computer Science* 2021 – Ongoing
- **University of Calcutta** Kolkata, West Bengal, India  
*B. Tech 1st Year - Electronics and Communication Engineering* 2020 – 2021
- **Baranagar Narendranath Vidyamandir** Kolkata, West Bengal, India  
*Higher Secondary (12<sup>th</sup> Standard)* 2018 – 2020
- **Baranagar Ramakrishna Mission Ashrama High School** Kolkata, West Bengal, India  
*Secondary (10<sup>th</sup> Standard)* 2008 – 2018

## Academic Achievements

- **CMI Entrance** Chennai Mathematical Institute  
*Entrance exam of Chennai Mathematical Institute* 2021
- **NEST** NISER  
*Entrance exam of National Institute of Science Education and Research (NISER)* 2021
- **WBJEE - Rank 1893** WBJEEB  
*West Bengal Joint Entrance Exam* 2020
- **12th Statistics Olympiad - Rank 108** AIMSCS  
*C R Rao Advanced Institute of Mathematics, Statistics and Computer Science (AIMSCS)* 2020

## Reading Projects

- **Ramanujan's work on theta functions and  $q$ -series and their connections with number theory.**  
Under Professor [Rupam Barman](#), IIT Guahati during the summer break in May – Jul, 2022.
- **Computational Number Theory and Algebra for Algebraic Complexity Theory**  
Under Professor [Nitin Saxena](#), IIT Kanpur during the winter break in Dec – Jan, 2022.
- **Factorization of Formula Arithmetic Circuits in Algebraic Complexity Theory**  
Under Professor [Nitin Saxena](#), IIT Kanpur during the summer break in May – July, 2023.

## Topics I Learned

- **Math Topics:-**
  - **Analysis:**
    - Real Analysis
    - Euclidean Space
    - Metric Space
  - **Algebra:**
    - Linear Algebra
    - Ring Theory
    - Galois Theory
    - Group Theory
    - Field Theory
  - Commutative Algebra
  - Algebraic Curves
  - Complex Analysis
  - General Topology
  - Algebraic Topology (Introductory)
  - Probability Theory
  - Integral Calculus
  - Differential Equations

- **Computer Science Topics:-**

- **Theoretical Computer Science Topics:**

- Design and Analysis of Algorithms - [Geevarghese Philip](#) and [Samir Dutta](#)
    - Theory of Computation
    - Complexity Theory - [Partha Mukhopadhyay](#)
    - Parallel Algorithms and Complexity - [Samir Dutta](#)
    - Algorithmic Coding Theory - [Amit Kumar Sinhababu](#)
    - Quantum Algorithmic Thinking - [Partha Mukhopadhyay](#)
    - Discrete Mathematics - [C Ramya](#) & [Partha Mukhopadhyay](#)
    - Arithmetic Circuits - [Nitin Saxena](#)
    - Computational Algebra and Number Theory - [Nitin Saxena](#)
    - Pseudorandomness - [Ramprasad Saptharishi](#)

- **Other CS Topics:**

- Introduction to Functional Programming (Haskell)
    - Advanced Programming with Python - [Samir Dutta](#)
    - Programming Language Concepts (Java, Concurrent Programming, Lambda Calculus)

- **Other Topics:-**

- Classical Mechanics
  - English

## Computer Skills

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- **Programming Languages:** C (Basic), Python (Intermediate), Haskell (Basic), Java (Intermediate), Unix/Linux Shell Scripting, HTML, CSS
- **Technical Skills:**  $\LaTeX$ (Advanced), Markdown, Git, Basic works in terminal, VIM, Obsidian

## Hobbies

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- Tinkering  $\LaTeX$ , Watch Anime, Listen Music (J-pop, Western), Theming linux desktop