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 (12th Standard)   *2018 – 2020*

Baranagar Ramakrishna Mission Ashrama High School   **Kolkata, West Bengal, India**
Secondary (10th 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 Theroy and Algebra for Algebraic Comlexity 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
- Complex Analysis

- **Algebra:**
  · Linear Algebra
  · Group Theory
  · Ring Theory
  · Field Theory
  · Galois Theory
  · Commutative Algebra

- 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
  · Arithmetic Circuits - Nitin Saxena
  · Computational Algebra and Number Theory - Nitin Saxena

- **Other CS Topics:**
  · Discrete Mathematics - C Ramya & Partha Mukhopadhyay

- · 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

- ○ **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

- ○ Watch Anime, Listen Music (J-pop, Western), Theming linux desktop