# Soham Chatterjee

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#### Education

Chennai Mathematical Institute

B. Sc - Mathematics and Computer Science

2021 - Ongoing

Chennai, Tamilnadu, India

**University of Calcutta** Kolkata, West Bengal, India

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 2008 - 2018

Secondary (10<sup>th</sup> Standard)

B. Tech 1st Year - Electronics and Communication Engineering

**Academic Achievements** 

Chennai Mathematical Institute

**CMI Entrance** Entrance exam of Chennai Mathematical Institute 2021

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**

 $\circ$  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**

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

## **Hobbies**

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