

SARTHAK SINGLA

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EDUCATION

Institute	Degree/Board	Year	CPI/%
Indian Institute Of Technology, Delhi	B.Tech Computer Science and Engineering	2019–present	9.660/10
BGS International Public School	CBSE(XII)	2019	96.2%
BGS International Public School	CBSE(X)	2017	10/10

SCHOLASTIC ACHIEVEMENTS

IITD Merit Certificate: Awarded in Semester 1 & 2 for being in top 7% students.

JEE Advanced Rank 72: Ranked 72 amongst 245,000 students.

JEE Mains Rank 425: Ranked 425 amongst 1,147,000 students.

NSEC: Qualified for INCHO (Indian National Chemistry Olympiad) in 2018.

RMO: Qualified for INMO (Indian National Mathematics Olympiad) in 2017.

KVPY Fellow: Awarded Fellowship by Dept. of Science and Technology, Govt. of India with Rank 86 in KVPY SA in 2017.

PRMO: Cleared in 2016 and 2017. Precursor to RMO (Regional Mathematics Olympiad).

NTSE Scholar: One of 922 students awarded scholarship out of 1,000,000 students across India. State Rank 1.

JSTSE Rank 3: One out of 150 students awarded with scholarship in 2015. Ranked 3 amongst 17,000 students from Delhi.

PROJECTS

Image Processing Algorithms <i>Intro. to Computer Science(COL100) : Prof. Prem Kalra, IIT Delhi</i> <ul style="list-style-type: none">Implemented Averaging Filter, Edge Detection and Least Energy Algorithm	October 2019 – November 2019 <i>Python</i>
Dynamic Memory Allocator <i>Data Structures and Algorithms(COL106) : Prof. Rahul Garg, IIT Delhi</i> <ul style="list-style-type: none">Implemented an Algorithm to Allocate & Free Memory Blocks and Defragment Free Memory.	November 2020 – December 2020 <i>Java</i>
Independent Storylines Calculator <i>Data Structures and Algorithms(COL106) : Prof. Rijurekha Sen, IIT Delhi</i> <ul style="list-style-type: none">Made a program to calculate number of independent storylines in a graph representing co-occurrence of characters.	December 2020 – January 2021 <i>Java</i>
Backend for Portal <i>Under Team Materate</i> <ul style="list-style-type: none">Developed Custom Learning portal and merged existing portals with the current portal.	February 2021 – May 2021 <i>Django</i>
MIPS Interpreter for Multicore Systems in C++ <i>Computer Architecture(COL216) : Prof. Preeti Ranjan Panda, IIT Delhi</i> <ul style="list-style-type: none">Made a MIPS Simulator in C++, with focus on efficient management of memory requests to incorporate multiple cores and avoid processor stalls..	February 2021 – May 2021 <i>MIPS/C++</i>
Traffic Density Estimator <i>Design Practices in Computer Science(COP290) : Prof. Rijurekha Sen, IIT Delhi</i> <ul style="list-style-type: none">Made a program to estimate the traffic density(queue and dynamic) at a traffic intersection.Analyzed various trade-offs to get the best design possible.	February 2021 – April 2021 <i>OpenCV in C++</i>
Multiplayer Maze Game <i>Design Practices in Computer Science(COP290) : Prof. Rijurekha Sen, IIT Delhi</i> <ul style="list-style-type: none">Made a maze game in SDL.	May 2021 – Present <i>SDL in C++</i>
Regular path Queries Based on Exemplars(RQuBE) <i>Prof. Sayan Ranu, Prof. Amitabha Bagchi, Prof. Srikantha Bedathur, IIT Delhi</i> <ul style="list-style-type: none">Assisted in the efficient implementation of Exemplar based RPQ.	May 2021 – Present <i>C++</i>

TECHNICAL SKILLS

Languages: Python, C/C++, Java, MIPS, Dart, HTML/CSS, JavaScript, Octave, MATLAB

Frameworks & Libraries: Flutter, Django, Bootstrap, AutoDesk Inventor, Latex, NumPy, Pandas, OpenCV, SDL

COURSES

Data Structures and Algorithms Digital Logic and System Design Computer Architecture Design Practices in Computer Science Coursera Courses Machine Learning and Neural Networks	Discrete Mathematical Structures Signals and Systems Introduction to Probability and Stochastic Processes Linear Algebra and Differential Equations & Calculus Introduction to Psychology
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VOLUNTEERING ACTIVITIES

National Social Service

January 2020 – Present

NSS, IITD

- **Vidya Teaching Project:** Helped students of a local school in their studies, January 2021 to Present
- **Intellify:** Made Mathematics Assignments for the students of Class 10th, June 2020 to July 2020.
- **Climate Crusade:** Actively worked to spread awareness of climate change in the campus, January 2020 to March 2020.

Academic Mentorship

December 2020 – Present

Board for Student Welfare, IITD

- Mentored first-year students in their Calculus course.

CO-CURRICULAR

Chess, Art, Guitar, Competitive Coding Enthusiast