

SARTHAK MISHRA | 20IE10029



INSTRUMENTATION ENGG. (B.Tech 4Y)

EDUCATION			
Year	Degree/Exam	Institute	CGPA/Marks
2024	B.TECH	IIT Kharagpur	8.65 / 10
2020	AISSCE	DAV Public School Chandrasekharpur, Bhubaneswar	96.80%
2018	AISSE	Public School, Phulbani	96.60%

AWARDS AND ACHIEVEMENTS

- Secured an All India Rank of **2193** in **JEE Advanced** 2020, among 2,00,000 shortlisted candidates
- Secured an overall **99.7657949** percentile score in **JEE main** 2020, among 11,00,000 registered candidates

Competitive Programming:

- Accomplished Specialist rank on Codeforces and have achieved a highest rating of 1563
- Secured a global rank of 625 among 12,000 participants in Codeforces Round #797
- Secured a global rank of 1464 among more than 8,000 participants in Google Kickstart 2022 round D
- Attained 4 Star rank on Codechef and have achieved a highest rating of 1842

PROJECTS

Custom Header Files [Feb 2022]

- Created custom header files for several data structures and algorithms that can be included in C++ programs
- Implemented the **stack** and **queue** data structures using vectors while for **deque** used circular arrays
- Customized *MyAlgorithm* header file that can be used to get results using **Bellman-Ford** algorithm, **Dijkstra's** algorithm for shortest path, **Kadane's** algorithm for maximum subarray sum, **detect cycles** in a graph, etc

Bus Reservation System [Dec 2021]

- Developed a **C++** program from scratch that allows the users to avail the functionalities such as registering themselves, login, seeing details of a bus, checking for availability of seats on a bus, and booking tickets
- Applied the concept of **File handling** to store, read and update the users, passengers, and buses' data
- Constructed different **classes** to improve the readability of the code and keep it **DRY** (do not repeat yourself)

Personal Portfolio Website

lun 2022

- Built a **responsive** personal Portfolio Website using HTML, CSS, and Bootstrap. It allows the viewer to know about me, and look at my projects, and skills with an option to connect with me or contact me
- Incorporated Carousel, navigation bar, and cards inside the code with the help of the **Bootstrap** framework
- Adopted the concepts of **web design** like colour theory while writing the CSS code to improve the user interface

Javascript Games [Jun 2022]

- Built three games using Javascript (card-match-game, whack a mole, roll the dice) that users can play online
- All the games are interactive and have front-end components responsible for enhancing the player's experience

SKILLS AND EXPERTISE

- Languages: C++, C, Elementary: Javascript, Python
- Libraries/Frameworks: C++ STL, CSS, Bootstrap
- Others: Data Structures and Algorithms, Object-oriented Programming

COURSEWORK INFORMATION

- Computer Science: Programming and Data Structures*
- Mathematics: Probability and Statistics | Advanced Calculus | Linear Algebra, Numerical and Complex Analysis
- Entrepreneurship: Introduction to Innovation and Entrepreneurship
- Other relevant courses: Digital Electronic Circuits* | Signals and Systems* | Data Communication | Network Theory* | Measurements and Electronic Instruments* | Electrical Technology*

(*means the course had both theory and lab components)

EXTRA CURRICULAR ACTIVITIES

- Member of the Silver winning Short Film Making team of Nehru Hall of Residence for the Inter-hall Social and Cultural events 2021-2022
- Member of the **Choreography** team of Nehru Hall of Residence for the Inter-hall events 2021-2022