

SARTHAK MISHRA | 20IE10029

INSTRUMENTATION ENGG. (B.Tech 4Y)



EDUCATION			
Year	Degree/Exam	Institute	CGPA/Marks
2024	B.TECH	IIT Kharagpur	8.65 / 10
2020	All India Senior School Certificate Examination	DAV Public School Chandrasekharpur, Bhubaneswar	96.80%
2018	All India Secondary School Examination	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 a NTA score of **99.7657949** in **JEE main**, 2020 among 1.1 million registered candidates.

Online Judges:

- Attained **Specialist** rank in **Codeforces** and have achieved a highest rating of **1563**.
- Secured a global rank of **625** among 12,000 participants in Codeforces Round #797.
- Participated in **Google Kickstart 2022** and secured a global rank of **2086** in round B.
- Attained 4 Star rank in Codechef and have achieved a highest rating of 1842.

PROJECTS

Bus reservation system

- Developed a C++ program from scratch that allows the user to access the functionalities such as registering him/herself, log-in, see details of a bus, check for availability of seats in a bus and book tickets.
- The concept of **File handling** was used to store, read and update the users, passengers and buses data.
- Different **classes** were used to improve the readability of the code and keep it **DRY** (don't repeat yourself).

Personal Portfolio Website

github.link

- Built a personal portfolio website using HTML, CSS and Bootstrap. It allows the viewer to know about me, look at my projects and skills with an option to connect with me or contact me.
- The Carousels, navigation bar and cards were incorporated inside the code using the **Bootstrap** framework.
- The concepts of **web design** like colour theory were used while writing the code to improve the user interface.

IoT based Automated Irrigation System:

- Worked with a team of 4 members to develop a set up for an automated irrigation system to help gardeners.
- The sensor checks for the moisture in soil and if its below the threshold level the pump starts to water the plants.
- It was implemented using the Arduino IDE, breadboard, moisture sensors, pump and jumper wires.

SKILLS AND EXPERTISE

- Languages: C++ | C | JavaScript
- Tools/Libraries: VSCode | LT-Spice | C++ STL | Bootstrap
- Competitive Programming: Data Structures and Algorithms
- Others: HTML | CSS | Object Oriented Programming

COURSEWORK INFORMATION

- Computer Science: Programming and Data Structures (Theory &Lab).
- Mathematics: Probability and Statistics | Advanced Calculus | Linear Algebra and Complex Analysis.
- Entrepreneurship: Introduction to Innovation and Entrepreneurship.
- Other relevant courses: Digital Electronic Circuits (Theory &Lab) | Signals and Systems (Theory &Lab) | Data Communication | Network Theory (Theory &Lab) | Measurements and Electronic Instruments (Theory &Lab).

EXTRA CURRICULAR ACTIVITIES

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