



EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2025	B.TECH	IIT Kharagpur	7.73 / 10
2020	All India Senior School Certificate Examination	National Public School Belaganj Gaya BR	88%
2018	All India Secondary School Examination	Jawahar Navodaya Vidyalaya Jethian Gaya	91.8%

PROJECTS

COVID-19 Tracker | Real API | Self Project

[Jun '23]

- Created a tracker app using **ReactJS**, **API** (Application Programming Interface) and **material UI** which tracks live data and information
- A real **API-based app** that tracks the live information about the Covid-19 situation such as the number of active and recovered cases
- Calling API**, converting API data into J object, using **ReactJS** library to build the frontend of tracker app to gather data and information
- A fully responsive website that can adapt to any device for delivering live data and information to the user as per the requirement

Supermarket Billing System | C++ | Self Project

[May '23]

- Implemented various **Functions** of **C++** and some parts of Object Oriented Programming for listing, updating and removing items
- Implemented **Class** as an object constructor and various functions such as administrator, menu, add, list and receipt for billing
- Provides the administrator to update items for the store and allow buyers to order items present in the store and generate their receipts

Energy Harvesting System | Course Project

Advisor: Prof Poulomi Ganguli | Agricultural and Food Engg.

[May '22 - Jun '22]

- Designed a simulation model of an energy harvesting device using **Piezoelectric Sensors** and model on 3D modelling platform Tinker Cad
- Created a hardware-based working model of the same using **Arduino UNO R3** Board, LCD, piezoelectric sensors, LED bulbs, 9V relay
- Designed and coded simulation model of **Pressure Detection System** and **Energy Converting System** for its applications on Tinkercad

Automated Door System | Course Project

Advisor: Prof Poulomi Ganguli | Agricultural and Food Engg.

[Apr '22 - May '22]

- Designed a simulation model of an automated gate device on the 3D modelling platform Tinker Cad and on open source platform Arduino
- Created a virtual working model of the system on the platform using **Micro Servo**, **Ultrasonic Distance Sensor** and **Arduino UNO R3**
- Coded simulation model for **Object Detection System** for defined ranges and for operating the lights in the sensor for various ranges

SKILLS AND EXPERTISE

Programming and Scripting Languages: C | C++ | Python | HTML | CSS | JavaScript

Libraries and Frameworks: React | Axios | Bootstrap | Material-UI | NumPy | Pandas | Matplotlib | Standard Template Library

Software and Tools: VS Code | Sublime Text | Code::Blocks | Google Collab | Jupyter Notebook | Tinkercad | Arduino | FreeCAD | ILOG Cplex Studio | Anaconda | Microsoft Office

AWARDS AND ACHIEVEMENTS

- Secured a rank within the top **6%** of students appearing in the JEE Advanced 2021 (out of **160 thousand** candidates)
- Secured a rank within the top **2%ile** of students appearing in the JEE Mains 2021(out of **1.2 million** candidates)
- Having a maximum rating of **1420** (2-star till the period July 2023)on the coding platform Codechef (handle - suraj_kr0302)
- Secured a rank of **1673** globally in the coding competition Starters 29 2022 (Div 4 Rated) on the coding platform Codechef
- Maintaining the recipient of the **Merit Cum Means** scholarship for two consecutive academic years for academic performance
- Secured a zonal rank of **113** and an International Rank of **2268** in the International Mathematics Olympiad (IMO) in the year 2015

COURSEWORK INFORMATION

Programming Courses: Programming and Data Structures*

Mathematics Courses: Transform Calculus | Advance Calculus | Probability and Statistics | Linear Algebra

Other Courses: Basic Electronics | Operational Research I and II* | Economics | Engineering Economy | Work System Design* | Management of Inventory Systems

-*courses with lab components

CERTIFICATIONS

Goldman Sachs Virtual Experience Program | Forage

[Jul '23]

- Working and gained skills in basic cryptography, password cracking systems and password best practices as a virtual participant
- Completed practical task modules for cracking leaked password databases and proposed potential uplifts to existing controls and methods

Python for Data Science, AI and Development

[Dec '22]

- Learned Python basics including data types, expressions, variables, data structure(Tuple, Dictionary, Sets, Lists) and File Handling
- Apply Python programming logic using branching, loops, functions, objects and classes including libraries such as NumPy and Pandas
- Access web data using **RESTAPIs**, **Web Scraping** and working with different file formats (CSV, XML, JSON, XLSX) using Python

EXTRA CURRICULAR ACTIVITIES

- Represented Azad Hall of Residence as a member of the Football team for **Inter Hall Sports &Games** at IIT Kharagpur in 2022-2023
- Part of the National Sports Organisation (**NSO Football**) out of 1500+ students as EAA (2021-2023) selected by IIT Kharagpur
- Volunteer as a member of the Hall Management Team of Gold Medal participants of the **68th Convocation** ceremony at IIT Kharagpur
- Member of the Gold-winning **Illumination** team and Bronze-winning **Rangoli** team representing Azad Hall of Residence in 2022-2023
- Worked on various simulations as a part of the **Hardware Modelling** team of Azad Hall of Residence in the academic session 2022-2023