EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2025	B.TECH	IIT Kharagpur	9.49 / 10
2021	AISSCE(XII)	B.D.M.INTERNATIONAL	97.4%
2019	AISCE(X)	B.D.M.INTERNATIONAL	97%

AWARDS AND ACHIEVEMENTS

- All India Rank of **1081** in **JEE Advanced 2021** and was among the top 0.627% out of the 142k+ applicants

- All India Rank of **890** in **JEE Mains 2021** and was among the top 0.09% out of the 1.3 million applicants

- All India Rank of **624** in **KVPY SX 2020** conducted by Indian Institute of Science (IISc) among 150k+ candidates

- General Merit Rank of **8** in **West Bengal Joint Entrance Examination 2021** among 65170 candidates

- Recipient of **Jagadis Bose National Talent Search (JBNSTS)** Senior Scholarship 2021

PROJECTS

Cross Coupled Quadrature VCO for ISRO SERDES Module | IIT Kharagpur   **[May'23 - Present]**
Faculty: Mrigank Sharad, IIT Kharagpur
- Implemented various schemes to obtain an oscillation frequency range of 500MHz to 1.5GHz in 180nm CMOS
- Implemented radiation hardening by splitting each stage to tackle Single Effect Transient and Upset
- Designed the entire layout of the VCO and checked DRC and LVS in Cadence Virtuoso Layout Suite
- Performed post-layout simulation after parasitic extraction and observed the degradation in performance

Design of Analog Front End using LTSpice | IIT Kharagpur   **[Dec'22 - April'23]**
Faculty: Mrigank Sharad, IIT Kharagpur
- Designed a front-end amplifier wiht an open loop gain of about 10,000 and bandwidth of 22KHz
- The amplifier was integrated with a V2I converter, current controlled oscillator(CCO), comparator and counter
- The counter tracks the number of peaks in a given time frame, thereby generating distinct levels

DIY Project | Pulse Oximeter | IIT Kharagpur   **[May'22 - June'22]**
Course Project
- Made a Pulse Oximeter using Arduino UNO, MAX30100 pulse rate sensor and LCD Display
- The results were 97% accurate as compared to devices available in the market

SKILLS AND EXPERTISE

Programming Languages: C | Python | HTML | CSS | JavaScript | Verilog
Softwares: Cadence Virtuoso | Tina TI | LT Spice | Silvaco | MATLAB | Simulink | ROS | Gazebo | Solidworks

COURSEWORK INFORMATION

Analog Electronic Circuits* | Digital Electronic Circuits* | Signals and Systems | Systems and Control
Semiconductor Devices* | Network Theory* | Electrical Technology* | Electromagnetic Engineering
Probability and Statistics | Advanced Calculus | Programming and Data Structures*
* The following courses had a laboratory component

POSITIONS OF RESPONSIBILITY

Secretary | E&ECE Department Society | IIT Kharagpur   **[Oct'22 - Present]**
- Organised several workshops, informative events for the students of the Depatment of E&ECE

Mechatronics Team Member | Swarm Robotics | IIT Kharagpur   **[Aug'22 - Present]**
- Participated in stage 1 of the International Conference on Unmanned Aerial Systems

GES Intern | Entrepreneurship Cell | IIT Kharagpur   **[Jan'22 - May'22]**
- Coordinated with team members in organizing the Global Entrepreneurship Summit 2022

EXTRA CURRICULAR ACTIVITIES

- Active participation in **Table Tennis** in Radhakrishnan Hall of Residence
- Attended Winter School of Autonomous Robotics organised by Technology Robotics Society, IIT Kharagpur