



EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2026	B.TECH	IIT Kharagpur	9.49 / 10
2022	CBSE Higher Secondary School Exam.	Vidyashram Public School, Kota	95.80%
2020	CBSE Secondary School Exam.	St. Paul's School, Jodhpur	95.60%

INTERNSHIPS

ULIP R&D Intern | Hindustan Unilever Limited | Bangalore, Karnataka **May'25 - Jul'25**

- Reduced manual effort by **30%**, through designing of an **integration framework** for seamless R&D-SC product data flow
- Improved product data accuracy by **25%** and ensured a unified data source through establishment of a **feedback loop**
- Enhanced cross-functional usability through analysis of **10+** digital PLM tools to upgrade the **R&D Digital Workbench**
- Saved **~150 operational hours annually** and eliminated inefficiencies by optimizing data flow architecture across teams

Process Engineering Intern | DSM-Firmenich | Bharuch, Gujarat **Jun'24**

- Strengthened compliance with process safety and design standards through validation of **more than 6 reactor systems**
- Optimized system reliability by resolving **3+ design discrepancies**, identified during assessment of **20+ P&IDs** and **GADs**
- Augmented process efficiency by **~10%** in pilot plant trials by evaluating functionalities of **ABB DCS, Aspen, and MixIT**
- Increased **prediction accuracy** of reaction yields by **~15%** through analysis of **50+ pilot plant runs** to scale-up processes

PROJECTS

Analysis of Electrowetting in a Liquid Jet | Prof. Monojit Chakraborty | Thesis Project **Jan'25 - Present**

- Aimed to experimentally and computationally investigate **liquid jet electrowetting** and measurement of **necking height**
- Analyzed droplet impact across Weber numbers (**7–20**) and studied electrowetting behavior under **100–390 Volts**
- Executed multiphysics simulations in **COMSOL** using coupled **Phase Field, Laminar Flow, and Electric Currents** modules

Analysis of Electrowetting on a PDMS-Mica Composite | Prof. Monojit Chakraborty | IIT Kharagpur **Jan'24 - Jan'25**

- Aimed to enhance the dielectric constant of conventional PDMS through the formulation of dispersion composites
- Prepared **PDMS-Mica Composites** with adjustable concentrations employing **Sonication** and **Spin-coating** techniques
- Conducted analysis of composites of concentrations up to **7%** across a voltage range of **0-400 V** using **Source meter**

Polymer composite for EMI Shielding Application | Self-Project **Mar'24**

- Aimed to study polymeric materials available for EMI shielding by evaluating the efficiency of over **20** composites
- Differentiated polymers into **2 types** as - **Intrinsic Conducting Polymers (ICPs)** and **Conducting Polymer Composites (CPCs)**
- Evaluated the **Shielding Effectiveness (SE)** and **Self-healing** properties of more than **four** different polymer structures

SKILLS AND EXPERTISE

Simulation Softwares: COMSOL, MATLAB, Aspen, Ansys | **Languages and Libraries:** C, Python, NumPy, Matplotlib
| **Product Lifecycle Management Tools:** SAP-PLM, LIMS, ELN, DMP, SAP-ECC | **Others:** MySQL, ABB, MixIT, PowerBI

COURSEWORK INFORMATION

Mass Transfer | Heat Transfer | Transport Phenomena | Fluid Mechanics | Chemical Engineering Thermodynamics | Instability and Patterning in thin film Polymers | Cryogenic Hydrogen Technology | Rheology of Complex Fluids | CFD Applications in Chemical Processes | Fuel Lab | Transform Calculus | Economics | Programming and Data Structures

POSITIONS OF RESPONSIBILITY

General Secretary Students' Welfare | Patel Hall of Residence | IIT Kharagpur **Aug'24 - Aug'25**

- Coordinated with **29** wing representatives to administer welfare initiatives for a community of **450+** hall residents
- Managed a budget of **INR 50K** to organize **donation drives** and engagement events that strengthened interactions

Sub Head | Shaurya, Sports Fest | IIT Kharagpur **Jul'23 - May'24**

- Organised hockey and cricket matches, efficiently overseeing the participation of **10+ teams** across both the sports
- Initiated the idea of adopting "**Rudra-the Rhino**", symbolizing the spirit of sports, as the official mascot of **Shaurya'23**

AWARDS AND ACHIEVEMENTS

- Achieved a perfect **SGPA** of **10/10** in the **fifth** semester, highlighting academic excellence in core engineering courses
- Ranked among **top 5%** in **JEE Advanced 2022** (200K+ candidates) and among **top 4%** in **JEE Mains 2022** (1.2M+ aspirants)
- Attained **Department Change** in **2022** placed in the **top 10%** of **2500+** students eligible for branch change at IIT Kharagpur

EXTRA CURRICULAR ACTIVITIES

- Sports** : Represented IIT Kharagpur in **hockey** in the **56th Inter IIT Sports Meet, IIT-B**, demonstrating athletic excellence
- Technology** : Represented Patel Hall in **Debate** and **Chem Quest** at Inter Hall General Championship 2024 and 2025
- Literary** : Won **District Level Essay Writing Competition** by the **Income Tax Department, Jodhpur**, showcasing writing skills