



Prashast Chitravanshi
Chemical Engineering
Indian Institute of Technology Bombay

22B0438
B.Tech.
Gender: Male
DOB: 18/12/2004

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2026	

Pursuing a **Minor** degree in the **Machine Intelligence and Data Science** program offered by C-MInDS

SCHOLASTIC ACHIEVEMENTS

- Achieved **9.71** SPI in fourth semester in the Chemical Engineering Department showcasing academic brilliance ('24)
- Obtained perfect **AA** grades in **8** courses in Chemical Engineering for excellent academic performance ('23 - '24)
- Attained a rank in the top **0.2%** in JEE Mains(1M+ students) and **0.95%** in JEE Advanced(150K+ students) ('22)
- Secured **99.2%** in **Class 10th** ICSE board examinations with a full score of **100** in total **5** out of 9 subjects ('20)

PROFESSIONAL EXPERIENCE

Summer Associate | Industrial Research and Consultancy Centre, IIT Bombay (May'24 - Jul'24)

- Collaborated in a team of **20** under the **Dean** and **Associate Dean** (R&D) at IITB to document technologies
- Crafted detailed content for a brochure, outlining **40+** patented technologies by IITB, prioritizing recent innovations
- Facilitated consultations with **12** professors to gather R&D insights for information dissemination to stakeholders
- Assisted in developing a hosted website through extensive research on diverse **industrial** and **societal** application

KEY PROJECTS

TAP theory-Going beyond the Standard Diffusion Curve | Research Project (May '24 - Present)

Chemical Engineering | IIT Bombay | Guide: Prof. AK Suresh, Prof. Jason R. Picardo & Prof. Sonali Das

- Collaborated in a team of **3** and reviewed **10+** research publications to study **gas-solid** interactions in catalyst bed
- Conducted **10+** simulations with **python** for conc. and flux profiles for **1-zone TAP reactor** in various conditions
- Formulated and solved governing equation using **advanced numerical and analytical methods** for **5+** cases

Digitalizing Protocol to Determine Reaction Kinetics | Course Project (Feb'24-Apr'24)

Chemical Reaction Engineering | Chemical Engineering Department | IIT Bombay | Guide: Prof. Sanjay Mahajani

- Performed **10+** laboratory experiments for **base-catalysed** hydrolysis of **Ethyl Ester** to generate its reaction data
- Designed and implemented an **Arduino UNO**-based **pH detection** system and circuit with ± 0.01 pH precision
- Developed Excel Macros to **digitize** and **automate** pH data analysis for determining rate kinetics of ester hydrolysis

Analysis of Morphological Parameters of Mars | Research Project (Jan '24 - Apr '24)

Centre of Studies in Resource Engineering (CSRE) | IIT Bombay | Guide: Prof. Alok Porwal

- Worked in a team of **2** to hypothesize on the planet's ancient **fluvial** systems and their **environmental** impacts
- Used Google Earth Pro, **ArcGIS**, and **QGIS** to analyze Martian valley networks, identifying ancient water sources
- Analyzed critical parameters like **V-Index** and **Junction angle** to understand Mars' hydrology and geomorphology
- Digitized and processed **2038km²** of topographical data using **Web Plot Digitizer** to enhance geological insights

POSITIONS OF RESPONSIBILITY

iGEM Team IIT-Bombay | International Genetically Engineered Machine Competition

Student Technical Team comprised of **20+** students developing a **Synthetic Biology** based **Carbon Capture** solution using coccolithophore marine algae, competing in the iGEM Competition among **400+** teams from over **45** countries

Human Practices Head | Core Team Member (Dec'23- Present)

- Spearheaded a team of **5** and extensively **researched** about the human practices aspect of the iGEM competition
- Coordinated and facilitated **stakeholder engagement** activities involving interviews of various industry professional
- Conducted **educational initiatives** and public outreach events to raise awareness of **SynBio** and **Climate Crisis**
- Compiled **10+** detailed reports and **documentation** for the overall project narrative in the iGEM competition

EXTRACURRICULARS

- Raised over **14,000** INR by running a campaign to provide **underprivileged kids** with educational kits
- Mentored **2** students for English Learning Program of ELIT during the summer with weekly **1-on-1** sessions
- Worked as **Coordinator** in **Literarium**, the flagship fest of Literati (Literary Arts club of IIT Bombay)
- Collaborated in a team of **4** to design and build a **RC training aircraft** that can do acrobatics and gliding
- Assisted as an **Interview Coordinator** in smooth functioning of the placement season for **1500+** students
- Secured **2nd** place in Times NIE Fundamental Quiz Competition of Mumbai Zone as a member of a team of **3**
- Tools and Languages** - C++, Python, HTML, MATLAB, Java, ArcGIS, QGIS, LaTeX, MS-Office, AutoCAD