



Dhruv Patwa
Chemical Engineering
Indian Institute of Technology Bombay

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B.Tech.
Gender: Male
DOB: 11/19/2001

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2023	

SCHOLASTIC ACHIEVEMENTS

- Achieved **99.16** percentile in JEE Advanced and ranked top **0.25%** in JEE Mains among **1.2 M** candidates (2019)
- Bagged the Kishore Vaigyanik Protsahan Yojana (KVPY) fellowship with an **AIR 434** among 0.14 M aspirants (2018)
- Recipient of the prestigious **NTSE** Scholarship by NCERT and secured **8th** rank in Rajasthan State (Stage 1) (2017)

PROFESSIONAL EXPERIENCE

Supplier Performance Management Intern | PepsiCo (May 2021 - Jun 2021)

- Developed a Supplier Performance Management Dashboard for India's logistics suppliers | **40+** locations
- Identified **40+** KPIs and developed a fully automated Power BI Dashboard to monitor performance of **30+** suppliers
- Created a Power BI report with detailed analysis page for each KPI and each supplier to generate analytics information
- Implemented for India and easily scalable to other markets, **reducing** significant manual work in the reporting process

Electric Vehicle Research Intern | Coulomb AI (Dec 2020 - Jan 2021)

- Performed Market Research on specifications and computed total cost of ownership for 2-wheeler EV and ICE vehicles
- Conducted Exploratory analysis of the trip data and charging data for Electric vehicles to draw insights using **Python**

LEADERSHIP ROLES

Department Research Coordinator | Undergraduate Academic Council, IIT Bombay (Apr 2021 - Present)

- Responsible for bolstering research culture in Mechanical Engg. Department involving **60+** professors and **600+** students
- Ideated the Summer Undergraduate Research Program, administered **35** research project entries from **14** professors and their allocation amongst **150+** applicants, **8 fold y-o-y** increase, **highest** among all the departments in institute
- Launched and headed the execution of Research Panel discussion and Mech Industry Talks attended by **100+** students
- Responsible for conducting Tech & RnD Expo, Grad preparation program and launching project portal of department

Department Academic Mentor | Student Mentorship Program, IIT Bombay (May 2021 - Present)

- Mentoring 4** sophomores to help them with their academic issues, time management and extra-curricular endeavours
- Guided **400+** students for course selection by writing reviews and for internships by organising two preparation sessions

Editor | Chemical Engineering Association, IIT Bombay (Jul 2020 - Apr 2021)

- Felicitated with Department **Special Mention** for exceptional organisational contributions | **4 out of 800+** students
- Published 2 newsletters received by **600+** people and launched the **1st ever** Department Placement Resume Repository
- Initiated** the 'Internship' and 'Path to URA' blog series catering **500+** students, **200%** y-o-y increase in blog readership

Maintenance Secretary | Hostel 16, IIT Bombay (Oct 2019 - Jun 2020)

- Ideated and executed one step complaint solution through QR codes, drastically reducing the time required in process
- Negotiated a budget of **INR 2.25 lakhs** for purchase of **15** new washing machines, impacting **1000+** hostel residents

KEY PROJECTS

Impact of COVID-19 on reproductive systems | Prof. Sanjeeva Srivastava, IIT Bombay (Oct 2020 - Present)

- Received **Letter of Recommendation** from Prof. Srivastava for excellent work ethics, sincerity and analytical abilities
- Analysed semen-proteome data of covid patients to search for differentially expressed proteins by **MATLAB** algorithms
- Co-authored** a Manuscript 'Viral fallout: Semen proteome reveals COVID-19 dysregulates several biological processes linked to male reproductive function' under review in journal **F&S Science**

Redesigning extraction process | Supervised Learning Project | Deccan Fine Chemicals (Jun 2021 - Present)

- Reducing time for extraction process by **79%**, transforming from batch to continuous, using Aspen for process simulation
- Optimized the process by number of stages and flow rates, achieving **2%** yield improvement and **\$160** savings/operation

News classification using Machine Learning (ML) | Course project (Jan 2021 - May 2021)

- Devised an **ML** algorithm based on Naive Bayes classifier which can identify whether a news item is fake or genuine
- Achieved an accuracy of **96%** in identifying fake news in the test data of news without labels of fake/genuine

Development of efficient Multi Layer Insulation (MLI) model | Course project (Jan 2021 - May 2021)

- Investigated the root cause of problems in the current MLI systems for insulating the cryogenic materials from literature
- Ideated** on spacer structures between MLI layers and **modelled** the system in MATLAB to **minimize** the energy loss

EXTRACURRICULAR ACTIVITIES

- Mentored 4** teams participating in EnB Buzz (startup pitching competition) by EnB club, IITB (2020)
- Actively worked in a team of **40** to pursue the marketing budget required for **Techfest** through sponsorship (2020)
- Completed 5 week long **Consulting 101** course and **Finance Bootcamp** by Career Cell, IIT Bombay (2020)
- Secured **3rd position** in Music Video Arcade conducted by Silverscreen, The Film Club of IIT Bombay (2019)
- Engineered and designed an RC plane from scratch by optimizing wing load, wing shape and aerodynamic lift (2019)
- Participated in Indian Case challenge conducted by Business Club, IIT Kgp based on the downfall of Boeing 737 (2019)