



Aditya Pravin Parsekar  
Chemical Engineering  
Indian Institute of Technology Bombay

22B0309  
B.Tech.  
Gender: Male  
DOB:

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

Pursuing a Minor degree in AI and Data Science offered by Centre for Machine Intelligence and Data Science

## SCHOLASTIC ACHIEVEMENTS

- Currently holding a **Department Rank** of **5** out of **150+** students in the Chemical Engineering Department ('24)
- Received an **AP grade** for exceptional performance in **Thermodynamics** given to only **3 out of 80** students('23)
- Achieved **AIR 2306** in National Eligibility cum Entrance Test (**NEET**) answered by **1.7 million+** candidates ('22)
- Awarded with the prestigious Kishore Vaigyanik Protsahan Yojna (**KVPY**) fellowship, administered by IISc ('22)
- Achieved **99.83 percentile** in Joint Entrance Examination Main among **1 million+** applicants across India ('22)

## INTERNATIONAL EXPOSURE

**Spaceport America Cup** | IITB Rocket Team Contingent | Core Team Member | USA (Jun '24)  
*World's largest rocket engineering conference and competition | 150+ Institutions | 6000+ Global participants*

- Secured a spot amongst **top 20** out of **156** student teams in the **10K COTS** category for a successful launch
- Led the team in **motor** and parachute assembly to successfully launch the rocket to an altitude of **9210 feet AGL**
- Presented the rocket to **1700+** rocketeers, judges and industry leaders including **Blue Origin, Virgin Galactic**

## KEY PROJECTS

**Design Engineer** | Propulsion Subsystem | IIT Bombay Rocket Team (Dec '22 - Present)  
*IN-SPACe recognized technical team developing high-power rockets for world's largest rocket engineering competition*

- **Conceptualized** the design of **10+** solid **rocket motor** assemblies and created their CAD models in SolidWorks
- Attained a **15%** reduction in weight through design and fabrication of an innovative **glass fibre** based motor casing
- Performed the **Crawford-Bomb Test** of different KNSB compositions with **1-5%** additives to improve **burn rate**
- Conducted static tests of motors with **1500+ N.s** of total impulse along with **pressure** and **thrust** data acquisition
- Developed the **KNSB** based propulsion system for the robust sounding rocket **Agneya** soaring over **3000 feet**

**Chemical Plant Optimization** | Course Project | DS 203 (Jul '23 - Nov '23)  
*Guide - Prof. Vinay Kulkarni | Centre for Machine Intelligence & Data Science | IIT Bombay*

- Utilized **230+** parameters to develop efficient ML models for predicting and controlling vibrations in a chemical plant
- Performed **EDA** on the raw dataset, used **VIF** to successfully remove high multicollinearity within the dataset
- Achieved up to **96% accuracy** by implementing Logistic Regression and Random Forest algorithms to create models

**Reynold's Apparatus** | Course Project | Introduction to Transport Phenomena (Oct '23 - Nov '23)  
*Guide - Prof. Guruswamy Kumaraswamy | Department of Chemical Engineering | IIT Bombay*

- Led a **5-member** team to create a **Reynold's Number** measuring apparatus and study the effects of bent pipes
- Classified flow patterns via an **ink injection** system and verified flow states for the prescribed Reynolds Number
- Concluded that **bent pipes** offers a **30%** higher friction factor by performing a comparison of the recorded data

**Mountain Climber** | Course Project | Makerspace (MS 101) (Mar '23 - Jun '23)  
*Guide - Prof. Ankit Jain (Mechanical Engineering) and Prof. Dinesh Sharma (Electrical Engineering) | IIT Bombay*

- Led a **6-member** team to design an efficient and automated payload carrier employing a **Drawbridge Mechanism**
- Designed an elaborate framework using **Fusion 360** and programmed an **Arduino** to carry a payload of **300g**

## POSITIONS OF RESPONSIBILITY

**Department Academic Mentor** | Student Mentorship Programme | IIT Bombay (May '24- Present)  
*Part of a 41-member team selected from 125 applicants based on interviews, inter-personal skills and peer reviews*

- Mentoring **6** sophomores in the chemical department, providing guidance on academic and **career development**
- Authored an exhaustive **course review** on core courses for the **DAMP** blog aimed at guiding future batches

**Convenor** | BioX Club | Institute Technical Council | IIT Bombay (May '23 - Mar '24)  
*Part of a 5-member team representing the interests of 700+ students in domains of Biotechnology and Biosciences*

- Managed to successfully plan and organize the **1000 Days 1000 Hopes** event which was aimed at promoting the use of **Green Energy** and bringing attention towards **climate change**; witnessed a footfall of **1000+** participants
- Curated data for the development of an online course on **Computational Genomics**, attracting **70+** enrollments

## EXTRACURRICULAR ACTIVITIES

- Achieved conversational proficiency in **Japanese** through **two full semesters** of intensive coursework ('24)
- Succeeded in passing **Praveshika Poorn** examination in **Harmonium**, conducted by **ABGMVM** ('20)
- Cleared **Grade 3** of Rock and Pop in **Electronic Keyboard** conducted by Trinity College of London ('19)
- Represented **Goa** at the **National level** in Vidhyarthi Vigyan Manthan examination held in **BARC** ('18)
- Competed in a **National Level Archery Competition** at Vijayawada representing the state of Goa ('17)