Vaidehi Jha
Chemical Engineering
Indian Institute of Technology Bombay

22B0336
B.Tech.
Gender: Female
DOB: 28/11/2004

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

Pursuing a Minor degree in **Artificial Intelligence and Data Science** at C-MInDS, IIT Bombay

SCHOLASTIC ACHIEVEMENTS

- Currently holding **Department Rank 12** among **150+** students in the Department of Chemical Engineering [‘24]
- Received the esteemed **NTSE Scholarship** awarded by NCERT to the top **0.2%** students among **1M+** candidates [‘20]
- Ranked in the top **15** (out of **30k+** candidates) in the **JSTSE** conducted by the Directorate Of Education, Delhi [‘19]
- Secured a percentile of **99.24** (**1M+** candidates) in JEE Main & **97.22** (**0.15M+** candidates) in JEE Advanced [‘22]

PROFESSIONAL EXPERIENCE

Technical Services Engineer | *Indian Oil Corporation Limited*   *(May‘24 - Jun‘24)*

On-site summer intern at an Indian oil and gas refining company ranked 94 on the Fortune Global 500

- Reduced manufacturing costs by **35%** by optimizing heat exchanger design with **ChemCAD** to meet **3+** required specifications
- Minimized pumping costs by **28%** by streamlining pressure drop in a **Pro II** simulated piping network across **15+** control valves
- Investigated **3** modes of energy loss and validated furnace efficiency with **99%** accuracy in the **Naphtha Hydrotreating Unit**

POSITIONS OF RESPONSIBILITY

Editorial Board Member | *Insight, Official Student Media Body of IIT Bombay*   *(Apr‘24 - Present)*

Creating content reaching 10k+ students with an online readership of 0.4M+ in a 3-tier team of 20+ students

- Exposed **electorate complications** in the Institute Secretary Elections 2024 in an article attracting **2.7k+** viewers
- Interviewed **25+** female student representatives for an editorial inspecting **gender biases** in institute student bodies
- Carrying out **5+** interviews & survey among **10k+** students to assess the functioning of the **Student Wellness Center**
- Handling Insight's official **Instagram** account with **6.2k+** followers that has seen an **84.5%** increase in reach in last 3 months

Department Academic Mentor | *Student Mentorship Program, IIT Bombay*   *(May‘24 - Present)*

Part of a 41 member team selected from 125 applicants based on statement of purpose, interview and peer reviews

- Mentoring **6 sophomores** in comprehensive semester planning, time management, academic and personal endeavours
- Responsible for delivering personalized one-on-one sessions to enhance tutees' **spoken** and **written English** skills

Convener, Literary Arts Club | *Institute Cultural Council, IIT Bombay*   *(May‘23 - Apr‘24)*

Selected from among 30+ applicants to promote the literary arts among a 10k+ strong student community

- Led a team of **50+** organizers to execute **20+** events for annual literary arts festival (**2k+** attendees, INR   budget)
- Utilized **Perl** to score and execute **300+** games in the IIT Bombay Scrabble Open (only college given worldwide accreditation)
- Collaborated with SNU for a national level business quiz, drawing **116+** teams with a prize pool of over **INR 500k**
- Created **60 questions** for over **36.6k viewers** across **22 countries** for IIT Bombay's quiz blog over a course of 6 weeks

KEY PROJECTS

Portfolio Management, FinSearch | *Finance Club, IIT Bombay*   *(Jun‘23 - Jul‘23)*

- Mitigated risk by **40%** through optimal asset allocation using **Modern Portfolio Theory** while maintaining competitive returns
- Utilized **Capital Asset Pricing Model** to measure the returns of the Bharti Airtel Ltd. stock as **10.5%** on the NSE

Predictive Vibration Analysis in Chemical Plants | *Course Project (Guide: Dr. Vinay Kulkarni)* *(Oct‘23 - Nov‘23)*

- Performed **PCA** on **241** parameters over 1000+ days, reducing data to **46** variables while retaining **90%** variance
- Optimized specific energy prediction using **Variance Inflation Factor** and backward feature engineering based on **p-values**

Digitalizing Protocol to Determine Kinetics | *Course Project (Guide: Prof. Sanjay Mahajani)* *(Mar‘24 - May‘24)*

- Performed **10+** laboratory experiments to collect reaction data and implemented an **Arduino** based **real-time** pH detection system
- Automated pH data analysis using **Macros** in **Excel** to calculate **5+** kinetic parameters of the ester hydrolysis reaction

EXTRA-CURRICULAR ACTIVITIES

Culturals	• Represented IIT Bombay in the **Inter IIT Cultural Meet 6.0** winning the **Literary Arts Cup** (‘23) • Secured **2nd prize** (**80+** participants) in the English **Creative Writing** General Championship (‘23) • Bagged the **3rd prize** and the **Best Script Award** in the Street Play General Championship (‘23) • Showcased artwork at **Kaladarshan**, IIT Bombay's largest fine arts exhibition to **10k+** enthusiasts (‘23) • Awarded **2nd prize** in the Zonal **Hindi Essay** Writing competition two years in a row (‘18,‘17) • Achieved a **1st division** result in the 3rd year **Fine Arts** exam conducted by Pracheen Kala Kendra (‘17)
Social	• Contributed **80+ hours** of community service under the Muskan & Neem School initiative, NSS (‘23) • Tutored a **visually impaired student** in **Mathematics** under the Ummeed initiative, NSS (‘22)
Astronomy	• Completed a reading project on **Cosmology and Dark Matter** under the Summer of Science (‘23) • Recognized with **Best Business Plan** in the Spacecraft Radiation Protection Solutions Competition (‘20)
Technical	• Constructed a **biometric lock** combining Arduino, motors and fingerprint sensors as part of TinkerKar (‘23) • Proficient in Python, C++, SQL, MATLAB, Perl, AutoCAD, Aspen, LaTeX, 3D Printer, Laser Cutting