



Dhara Sachin Shah
Chemical Engineering
Indian Institute of Technology Bombay

22B2524
B.Tech.
Gender: Female
DOB: 15/01/2005

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2026	
Intermediate	CBSE	International Indian School, Al Jubail	2022	95.40%
Matriculation	CBSE	International Indian School, Al Jubail	2020	95.00%

Pursuing a Minor degree from the Department of Computer Science and Engineering, IIT Bombay

SCHOLASTIC ACHIEVEMENTS

- Secured merit-based branch change to Chemical Engg (top 10 percent out of 1300+ students) [2023]
- Bagged 2nd place in the Ganit quiz competition, surpassing 800+ participants nationally [2017]
- Ranked 175th place among 600+ participants in Reverse Coding X at Shaastra, IIT Madras [2023]
- Achieved top 15% ranking out of 4000+ girls internationally in ICPC AlgoQueen contest [2023]
- Attained 13th rank in school and 65th nationally in International Competitive Aptitude Test, iCAT [2019]
- Placed in the top 5 % of students among 0.2 Million candidates in the JEE Advanced Exam [2022]
- Recognized with a CBSE merit certificate for achieving a perfect 100 in Mathematics during Class 10 [2020]

PROFESSIONAL EXPERIENCE

Reliance Industries Limited, Hazira | Summer internship [May'24-Jun'24]

- Completed a 2-month training program at Reliance Industries, Hazira Manufacturing Division, MEG plant
- Engineered a Shell & Tube HE using HTRI, showcasing advanced application of theory on real case scenario
- Designed 3 process engg components in HYSYS, validated via on-site experience and literature review
- Gained firsthand experience in critical equipment maintenance by attending Turn Around Maintenance
- Acquired expertise in unit operations and processes essential for driving 150 KTA production efficiently

KEY PROJECTS

Real time Ester Hydrolysis Kinetics monitoring | Course Project

[Mar'24-May'24]

Prof. Sanjay Mahajani | Department of Chemical Engineering, IIT Bombay

- Worked in a team of 5; implemented pH data acquisition via analog-to-digital and researched literature
- Utilized pH, temperature and concentration as metrics to determine reaction kinetics and activation erg
- Enabled real-time viewing of results remotely using IOT based equipment, ThingSpeak and API keys

Real time driver drowsiness detection | Season of Code

[May'23-Aug'23]

Web and Coding Club | Institute Technical Council, IIT Bombay

- Developed a road safety solution that uses webcam input to assess wakefulness and prevent accidents
- Harnessed image processing and deep learning techniques, emphasizing robust computer vision
- Utilizing neural networks for comprehensive analysis, ensuring in-depth insights and understanding

Obstacle Maneuvering Bot | Makerspace Project

[Oct'22-Feb'23]

Prof. Joseph John | Department of Electrical Engineering, IIT Bombay

- Led a team of 6 skilled individuals, developing a versatile Arduino-based line-following robot
- Successfully built robot proficient in sharp turns and obstacle detection after 3 development attempts
- Integrated motor drivers, IR sensors for accurate tracking, and UV sensors for obstacle detection

Data Structures and Algorithms | Learners' Space

[Jul'23]

Web and Coding Club | Institute Technical Council, IIT Bombay

- Developed proficiency in solving complex problems efficiently through the application of DSA
- Gained the ability to analyze and optimize code for improved performance and resource utilization

- Exceeded **70 %** accuracy through application of meticulous backtesting and evaluation techniques
- Conducted finance research, explored options pricing with **Python**, emphasizing **Black-Scholes'** model

TECHNICAL SKILLS

Languages: C, C++, Python, SQL, MATLAB, Arduino, HTML, CSS
Frameworks: Git, GitHub, Flask, OpenCV, Aspen
Software: Microsoft Word, Powerpoint, Excel, HYSYS, HTRI, AutoCAD, LaserCAD
Libraries: Matplotlib, Numpy, Tensorflow, PyTorch
Developer Tools: VS Code, L^AT_EX

POSITIONS OF RESPONSIBILITY

Department Academic Mentor | Student Mentorship Program, IIT Bombay [Jun'24-Present]

Part of a **41-member** team selected from **125** applicants based on peer reviews and interviews

- Mentoring **6** sophomores in their academic, social and co-curricular pursuits, ensuring their holistic well-being
- Authored an exhaustive **course** review as part of the DAMP blog subgroup aimed for guiding future batches

Coordinator | AZeotropy | India's Largest Intercollegiate Chemical Engineering Symposium [Mar'24]

Footfall: **11,000+** | Event: **15+** | Colleges: **350+**

- Engaged as a Public Relations (PR) coordinator to reach out to other colleges for event collaboration
- Served as a Point of Contact (**POC**) for Reliance industries Limited (RIL) during symposium at IITB

Coordinator | Entrepreneur Cell | IIT Bombay | E-Summit, Flagship event of E-cell [Feb'24]

Footfall: **60,000+** | Event: **50+** | Speaker Sessions: **120+**

- Coordinated The Corporate Dual competition during **E-Summit**, enhancing engagement and participation
- Led a team of **10** to triumph in executing a successful and impactful competition

Organiser | Mood Indigo | Asia's largest Annual Cultural Festival [Dec'22]

Footfall: **146,000+** | Event: **240+** | Colleges: **4000+**

- Facilitated competitions as the **anchor** for beatboxing and timekeeping for '**Indigo Saga**' event
- Served as a Point of Contact (POC) for the judges during competition evaluations

COURSES UNDERTAKEN

Chemical Engineering	Chemical Engineering Thermodynamics, Introduction to Transport Phenomena, Fluid Mechanics, AI and DS in chemical engineering, Intro to Numerical analysis, Reaction Engineering, Separation processes, Heat and Mass transfer, Material and energy balances, Chemical Lab
Computer Science	Computer Programming and Utilization, Logic in CS, Discrete Structures
Extra Courses	Calculus I & II, Linear Algebra, Differential Equations, Quantum Physics, Classical Physics, Psychology, Management, Economics, Design Thinking
MOOC	Supervised machine learning on Coursera platform, CNN - deep learning

EXTRACURRICULAR ACTIVITIES

• Social Activities

- **Elite Youth Leadership Program (YLP)** | Toastmasters Club [2018]
 - * Won **Best Speaker** award twice and **Best Evaluator** 2nd runner up amongst **20+** competitors
 - * Remarkable performance paved the way for participation in the Division D conference, District 79
 - * Delivered an **award-winning** international speech on the theme of "NEVER GIVE UP"
- Completed all levels of **abacus** under Universal Concept of Mental Arithmetic System, UCMAS [2014-17]
- Ranked among **top 20** in Bharat Scouts and Guides, surpassing **100+** Pravesh exam participants [2013-15]

• Volunteering Activities

- Dedicated **80+** hours to mentor students as an **NSS** volunteer under The Movement India scheme [2022-23]
- Participated as a dedicated **SSS** volunteer during the freshers' **technical orientation** program [2023]