



**Kshitij Sovanee**  
**Chemical Engineering**  
**Indian Institute of Technology, Bombay**

**19D110023**  
**B.Tech.**  
**Gender: Male**  
**DOB: 28-12-2001**

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

Pursuing a **Minor** degree in **Industrial Engineering & Operations Research**

## SCHOLASTIC ACHIEVEMENTS

- Currently ranked **8<sup>th</sup>** among 138 students in the Department of Chemical Engineering ('21)
- Secured a perfect **10 SPI** in the fourth semester & **2 AA** grades in core theory courses in the third semester ('20 - '21)
- Served as a Teaching Assistant for **Physical Chemistry**, responsible for conducting tutorial sessions for 35 freshmen ('21)
- Awarded **Branch Change** to Chemical Engineering (**80** in 1000+) based on excellent academic performance ('20)

## POSITIONS OF RESPONSIBILITY

**Cabinet Head | English Learning Program | Student Mentor Program (SMP), IIT Bombay** (Mar'21 - Present)

*Selected as Head of the body pioneering the development of soft skills and English learning in the Institute*

- Ideated and executed a **5 week** long interview communication bootcamp titled 'Demystifying Interviews' targeting internship aspirants, garnering a cumulative participation of **1000+** students
- Leading a team of **40+** TAs curating English content over 3 editions of English Language Improvement Training (ELIT)
- Revamped **outreach channels** for ELIT achieving a **50% y-o-y increment** reaching **650+** registrations for the Summer edition
- Collaborating with **Gender Cell & Hostel Affairs Council** to curate a 7-week gender sensitization module for **1.3k+** UG entrants

**Student Mentor | Department Academic Mentorship Program (D-AMP), Chemical Engineering** (May'21 - Present)

*Selected in a team of 32 of 80 applicants based on rigorous interview process, interpersonal skills and peer reviews*

- Mentoring **4 sophomores** in an **online semester** to help them with their academic transition and holistic development
- Curating help-sessions and improvement programs in **Thermodynamics** for the incoming sophomore batch of **160+** students
- Contributed to the DAMP Blog by publishing **3 exhaustive course reviews** aimed at providing guidance to the future batches

**Institute Sports Convener | Institute Sports Council, IIT Bombay** (Jun'20 - Mar'21)

*Selected as a member in a council of 60, catering to the sports interests of 10,000+ students across the Institute*

- Partnered with **Goonj** (NGO) for COVID-19 fundraiser by organising **Virtual Run** which saw a participation of **1.3k+** across India
- Collaborated in a sub-team of **7** members for managing journalism coverage and blogging of all events across **14+** sports

## TECHNICAL PROJECTS

**Inventory Simulation | Course Project, IE630 | Simulation Modeling & Analysis** (Mar'21 - Apr'21)

- Built **90%** confidence intervals for mean monthly cost and profit for an (M,L) inventory system for **112** months (with warmup) having discrete demand and exponential interarrival period using **AnyLogic** software
- Constructed a **2<sup>3</sup>** factorial design matrix, further used **Optquest** (AnyLogic's inbuilt optimiser) to obtain optimal values of M&L

**Developing Thermodynamic Models | Open Source Chemical Simulator | FOSSEE, IITB** (Jun'21 - Present)

*Guide: Prof Kannan Moudgalya | Department of Chemical Engineering*

- Built thermodynamic packages in **OpenModelica** to contribute to the **Govt of India** initiative for developing **OMChemSim v1.0**, promoting **FLOSS** (Free/Libre & Open Source Software) tools for education, research and avoiding expensive licenses
- Prepared a cyclohexane production flowsheet using **Raoult's Law** and included it on the OM Completed Flowsheets Library
- Modeling & integrating the **Lee-Kesler-Plöcker** EoS to calculate equilibrium mole fractions, fugacities and molar flows

**Solar Powered Vaccine Storage Unit | Course Project, CL246 | Heat Transfer** (Jan'21 - Apr'21)

- Analytically modeled SoVac and calculated the maximum time of storage (**9 hrs**) using empirical **Nusselt number** correlations
- Concluded that SoVac is cheaper than existing alternatives by **36%** through a cost and feasibility analysis

## SPORTS ACHIEVEMENTS

- Clinched **Gold** at the **54<sup>th</sup> InterIIT Sports Meet** among **23** teams as a part of the Table Tennis Team ('19)
- Recipient of the **Freshman of the Year** award (**2** out of 1000+) for positive contribution to the Institute sports culture ('20)
- Bagged **Bronze** at **Udghosh** (IIT Kanpur's Inter-Collegiate Sports Festival) as a part of the Table Tennis Team ('19)

## EXTRACURRICULAR ACTIVITIES

- Served as a content creator for **Milestone**, the official magazine of IITB Racing ('20)
- Served as an **Article Lead** for Fresher's Newsletter 8.3 article titled **Lost Insti Culture**, an **Insight** initiative (media body) ('21)
- Pursuing a 4 week long 'Public Policy Bootcamp' covering **history** and **STEM** policies under Learner's Space ('21)