



Aadi Bansal
Chemical Engineering
Indian Institute of Technology Bombay

210020001
B.Tech.
Gender: Male
DOB: 09/03/2004

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2025	
Intermediate	CBSE	Shiv jyoti convent school	2021	94.20%
Matriculation	CBSE	delhi public school	2019	96.00%

- Pursuing a **minor** degree in the Department of **Computer Science and Engineering**, IIT Bombay

SCHOLASTIC ACHIEVEMENTS

- Ranked amongst the **top 1.1%** in JEE Advanced examination among **0.14 Million+** candidates (2021)
- Placed in top **0.28** percentile in the JEE Mains examinations from a pool of **1 Million+** candidates (2021)
- Secured a state rank of **12** in National Talent Search Examination (NTSE) among **70K+** candidates (2019)
- Awarded with an **AA grade** (2 out of 70) for exceptional performance in CL246 **Heat Transfer** course (2023)

PROFESSIONAL EXPERIENCE

Supply Chain Intern | Eris Lifesciences Ltd

(Jun'23 - Jul'23)

Part of Supply Chain Management team, end-to-end planning for Anti-Diabetes & Cardiovascular products.

- Achieved over **85% Forecast Accuracy** and less than **5% Forecast Fidelity** by meticulously analyzing historical sales data, market trends, and pertinent factors to precisely forecast pharmaceutical product demand for the month
- Evaluated **Key Production Indicators(KPI)** and consensus forecast in collaboration with the marketing team
- Reduced stockholding period of pharmaceutical products by **5%**, improving **Inventory control** and holding cost

KEY PROJECTS

Discovery of Bimetallic Catalysts with DFT-Assisted Machine Learning

(Jun'23 - Present)

Research Project | Summer Undergraduate Research Program, IITB | Guide: Prof. Ojus Mohan

- Optimized the existing **RFR** and **GPR** ML models for ethanol reforming DFT Data with **100+** data points
- Implementing **improved ML models** for bimetallic catalyst discovery for **CO2 conversion** reactions
- Conducting in-depth analysis of **5+** research materials and **DFT** calculations for missing experimental dataset

Optimization of a Car Cabin Temperature Control System | Course Project

(Jan'23 - Apr'23)

Guide: Prof. P Sunthar, Department of Chemical Engineering, IIT Bombay

- Spearheaded a team of **8** to design a system that minimizes the temperature inside a parked **car's cabin**
- Conducted a detailed thermal analysis using computational fluid dynamics (**CFD**) techniques in **OpenFOAM**
- Employed heat transfer coefficient calculations and energy balance analysis to estimate **heat transfer** within car cabin
- Developed a **cost-effective** custom car cabin **insulation**, achieving an exceptional **30%** temperature reduction

Face Recognition using Deep Learning CNN in Python | Course Project

(Jan'23 - Apr'23)

Guide: Prof. Abir De, Department of Computer Science and Engineering, IIT Bombay

- Implemented a Deep Learning Pipeline based on **FaceNet** using Sequential API in **TensorFlow** -Python
- Explored advanced techniques like **face alignment**, **landmark detection** to enhance the model's performance
- Developed and preprocessed a **CNN** using the **VGG16** architecture demonstrating an accuracy of over **70%**

Med-Glance | Entrepreneurship | Course Project

(Aug'22 - Nov'22)

Guide: Prof. A. Narasimhan, Desai Sethi School of Entrepreneurship

- Developed a **Blockchain-powered** comprehensive healthcare repository for maintaining medical records
- Collaborated with **20+** doctors and **10+** insurance companies for customer discovery and market research
- Formulated a comprehensive business model, navigating **investor pitches** and **funding negotiations**

MNIST Image Recognition | Self Project

(May'23 - Jul'23)

- Implemented **Deep neural Network** for handwritten digits recognition using **MNIST** dataset of **70000** images
- Utilized **activation** functions, **regularization** techniques, **parameter tuning** to enhance the model's performance
- Trained the **CNN model** using the **Adam optimizer**, employing an appropriate learning rate and batch size
- Model is successfully able to predict the digits in test dataset correctly with an **accuracy score** of **97** percent

Option Pricing Models

(Jun'23 - Jul'23)

FinSearch | Finance Club, IIT Bombay

- Led a team of **4** to implement option pricing models and predict option derivative price and **market volatility**
- Implemented **Black Scholes**, **Binomial model**, and **Monte Carlo** Simulation using NumPy and Pandas
- Back-tested nifty shares of TATA Motors & LIC India; achieved **97.3% accuracy** in predicting Option Prices

Unveiling the Chemical Industry: Techno-commercial aspects | Learner's Space (Jun'23 - Jul'23)

- Assessed the techno-commercial challenges faced by chemical businesses in today's complex and competitive landscape thereby learning more about the chemical industry considering factors such as **potential profitability**
- Analyzed the **chemical industry** extensively considering factors such as potential profitability & market trends
- Explored the **techno-commercial** feasibility of integrating sustainable practices within the chemical industry

POSITIONS OF RESPONSIBILITY

Mentor | College Representative Program | Abhyuday, IIT Bombay

(Jun'23 - Present)

Largest student-run social body for leadership and impact in india | Patronage: **UNICEF**, **PETA** | Reach **5M+**

- Guiding **8+** college representatives to ensure smooth execution of tasks to create an impact in **5** colleges
- Empowering CRs to spearhead **impactful events**, workshops, and campaigns driving positive social change

Pronites Coordinator | Mood Indigo, IIT Bombay

(Jun'22 - Dec'22)

52nd edition of Asia's largest college cultural festival | **146,000+** footfall | **240+** events

- Working in a team of **60**, responsible for smooth execution of flagship concerts attended by a crowd of **100K+**
- Conceptualizing and organizing **Livewire - the biggest semi-professional** Indie band competition in Asia
- Travelling and hosting camps in **5+** cities of India, capturing talent from diverse geographies across the country

Mentor | FinSearch | Finance Club, IIT Bombay

(Jun'23 - Present)

A project-based financial research program

- Mentored **4 teams** for a project and a case study involving the trading of currencies and commodities in the market
- Executed a two-month-long learning structure aimed at providing the fundamentals of the **stock market** and trading

TECHNICAL SKILLS

Programming

C++ | Python | NumPy | HTML | \LaTeX | CSS | Markdown

Software

MATLAB | OpenFOAM | Git | MS Office | Adobe Photoshop | Google Workspace

RELEVANT COURSES UNDERTAKEN

Core Courses

Chemical Reaction Engineering*, Mass Transfer*, Solid Mechanics*, Thermodynamics, Heat Transfer, Chemical Engineering Lab-I, Data Analysis, Process Fluid dynamics, Introduction to Transport Phenomenon, Numerical Analysis, Computational Methods Lab, Introduction to Chemical Engineering

Other Courses

Electrical Engineering*, Introducing to Machine Learning, Linear Algebra, Introduction to Entrepreneurship, Economics, Differential Equations II, Psychology, Electricity and Magnetism, Quantum Physics, Differential Equations, Engineering Drawing

EXTRACURRICULAR ACTIVITIES

Sports	<ul style="list-style-type: none">Completed 2-semester training under National Sports Organization (NSO)Completed 6.4km trek to Tiger Nest Monastery in Bhutan at an elevation of 10,240ftParticipated in district chess competitions and summer cricket camps in Delhi
Social work	<ul style="list-style-type: none">Head of public awareness committee at DISHA- an NGO that organizes camps and spreads awareness on Diabetes and its management among rural population around AgraVolunteer at SMRITI- an NGO that works towards the social upliftment of women
Competitions	<ul style="list-style-type: none">Secured a Top 16 position among 450+ teams that participated in CodeWars v1Participated in EnB buzz to build a business model for EV's and a detailed BMCPerformed in school's annual cultural fest, played keyboard as a part of school orchestraParticipated in the institute's exclusive Freshie Fashion Fiesta show, held by StyleUp

* courses to be completed by December '23