



Pratham Kulkarni
Mechanical Engineering
Indian Institute of Technology Bombay

210100120
B.Tech.
Gender: Male
DOB: 16/03/2003

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2025	

Pursuing a Minor degree from the department of **Computer Science and Engineering** at IIT Bombay

SCHOLASTIC ACHIEVEMENTS

- Secured an All India Rank **998** in **JEE Advanced** (Oct 2021) | Secured a **9.5 SPI** in the 3rd semester (Apr 2023)
- Awarded **KVPY** fellowship by IISC on securing All India Rank **541** out of over 0.1 million candidates (Jan 2021)

PROFESSIONAL EXPERIENCE

ITC Ltd. | *Operations Intern* | *New Business Division: Cloud Kitchen* (May- Jul 2023)

Established temperature maintenance protocols for frozen products throughout the cold chain network of the venture

- Strategised **35%** enhancement in product quality, facilitating successful expansion to a customer base of **10 mil+**
- Achieved a **20%** improvement in product delivery and a **17%** reduction in cost by revolutionising the supply chain
- Enhanced operational efficiency using **IoT**s and **geo-fences** automating data-driven supervision across **19** kitchens
- Integrated demand sensing parameters and real-time inventory mapping through **Enterprise Resource Planning**

POSITIONS OF RESPONSIBILITY

Junior Design Engineer | *Suspension Subsystem* | *Racing Team, IIT Bombay* (Jan 2022- Present)

Represented India at Formula Student UK 2023: a global college competition with 100+ teams from 30+ countries

- Designed and validated **24** components through kinematic simulations, resulting in **15%** lower energy consumption
- Proposed a system integration strategy for a front **ARB**, optimising performance by **22%**, reducing **25g** of weight
- Developed linear algebraic algorithms to model the non-planar motion of a rocker, analysing suspension behaviour

Department Academic Mentor | *Student Mentorship Program, IIT Bombay* (May 2023- Present)

Selected in a 54-member team based on ethical assessment, peer reviews, SOPs and a rigorous interview process

- Mentoring **6** sophomores with their academic & co-curricular pursuits, providing credible counsel for personal issues
- Developing and curating the **DAMP** blog featuring **150+** comprehensive course reviews and articles on internships

KEY PROJECTS

Molecular Dynamics Research | *Guide: Prof. Upendra Bhandarkar* (Nov 2022- Present)

Modelled motion of non-equilibrium molecules in an inert environment, with specific emphasis on chemical kinetics

- Analyzed energy functions of **1 mil** non-equilibrium particles, unearthing **2** theories advancing molecular simulation
- Optimised simulations by **35%** utilising **Monte Carlo**, **neighbour list** and **mirror image** convention algorithms

Momentum Based Portfolio Strategy | *Finsearch* | *Finance Club, IIT Bombay* (Jun- Jul 2023)

Devised a data-driven portfolio strategy for large-cap NSE stocks, employing quantitative models and data analysis

- Leveraged **trend lines**, **moving averages**, **stochastic oscillator** and **ADX** to identify **10** high-growth stocks
- Generated **17% y-o-y** IRR results by employing a volatility-based trading strategy using Random Forest algorithm

Human Pose Estimation | *Seasons Of Code* | *WnCC, IIT Bombay* (May- Jul 2023)

Developed a pipeline for data preprocessing, feature extraction & pose estimation, integrating deep learning frameworks

- Trained models for **CIFAR-10**, **MNIST**, and **LSP** data sets using **ResNet** with a prediction accuracy of **91%**
- Minimised **cross entropy loss** using PyTorch with ReLU, LeakyReLU, and Tanh functions, and Adams optimiser

Understanding Mergers & Acquisitions | *OneCard* | *Research Project* (Jun- Jul 2022)

Researched MnA, analyzing case studies, examining the financial, strategic, & operational implications of transactions

- Evaluated **5+** impacts of mergers, acquisitions on bond & stock markets to correlate them with current markets
- Synthesised and analysed patterns of mergers and acquisitions by scrutinising **8** case studies and research papers

EXTRACURRICULAR ACTIVITIES

International Exposure	Goodwill Exchange Program <i>Bednarska School, Warsaw</i> (May 2018) <ul style="list-style-type: none">Collaborated with students, engaging in cross-cultural discussions, fostering global perspectivesAnalysed the economic effects of Poland's wartime experiences, developing new market theories
Sports	<ul style="list-style-type: none">Selected for the IITB Inter IIT Cricket Camp 2022 out of 10K+ students (Oct 2022)Represented the Hyderabad U-14 state cricket team in the MSK Prasad Trophy (May 2017)Represented the South Zone at the Indian Public Schools Conference, Delhi (Oct 2018)Captained The Hyderabad Public School to silver in the Elite Triumph Cup (Dec 2018)
Competitions	<ul style="list-style-type: none">Selected in the top 40 of IITB for BCG ideathon amongst 2800+ students (Apr 2023)Justified the 'buy' call at Equity Research Competition based on price indicators (Sept 2022)