Abhav Singh
Indian Institute of Technology Bombay
Economics

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Examination	University	Institute	Year	CGPA
Graduation	IIT Bombay	IIT Bombay	2023-27	8.93

Pursuing a **Minor degree** in **Data Science & Artificial Intelligence** under the C-MInDS department, IIT Bombay.

SCHOLASTIC ACHIEVEMENTS

- Achieved **99.71 percentile** in JEE Mains among **1.2 million** applicants, demonstrating strong **analytical** skills.
- Achieved **99.04** percentile in JEE Advanced amongst **1.89 lakh** applicants, demonstrating strong **academic prowess**.
- Secured a perfect **AA** grade in **3** rigorous courses, highlighting exceptional **academic** performance and consistency.

PROFESSIONAL EXPERIENCE

Buisness Finance Intern | Bank of Baroda (Jul'25-Present)

- Analyzed **NIMs** of $10+$ Private vs PSU banks to identify key drivers (*yields, CASA, credit*) to enhance fee structure.
- Reviewed **14,495 crore** non-interest income by disaggregating **10+** *fee sources* (e.g., *RAM, digital*) identifying gaps.

Predictive Modeling Intern – Financial Behavior | BNP Paribas Mutual Fund (Jun'25 - Aug'25)

*BNP Paribas is a leading global bank with **$2.7 trillion AUM**, spanning banking, asset, and wealth management.*

- Built a **Random Forest** model on to predict scheme reinvestment using **customer traits and transaction** history
- Backtested predictions on past **3 year monthly data** of **7 lakh investors** to find the **likelihood** of reinvestment

Software Development : Web Parsing | Mirae Asset Management Firm (Dec'24 - Jan'25)

*Mirae Asset is a global financial group with **$257B+ AUM**, spanning ETFs, mutual funds, and wealth*

- Parsed financial news to assess evolving **debt risks**, aiding credit team with timely insights of **300+ companies**.
- Filtered credit-relevant news using **keywords** in urls, summarizing the news and giving them a **credit score** .

KEY PROJECTS

Impact of CDS Spread Changes on U.S. Banking | Research Project | BITS Pilani(Hyd) (Jun'25-Jul'25)

Guide: Assoc.Dean R&D Prof. Swati Alok | Dept.of Economics & Finance | Birla Institute of Tech. and Science, Pilani

- Analyzed how **Credit Default Swap (CDS) spread shifts** influence **bank equity & bond pricing** via credit risk
- Employed **panel regression with fixed effects** to study credit risk pricing across **U.S. banks using CDS data**

Option Pricing Models | FinSearch | Finance Club (Jun'25 - Jul'25)

- Implemented **Black Scholes** & **Binomial Tree** models and achieved $> \mathbf{90\%}$ accuracy in predicting Option prices
- Conducted Python-based **Monte Carlo** simulations with an average of **8000** iterations to estimate the option prices

Equity Research Automation | Summer of Code | WnCC Club (Jun'25 - Jul'25)

- Built **automated research pipeline** using Python for **equity research** via **data fetching** and **ratio analysis**
- Used **Pandas** for data wrangling; applied **SMA/EMA**, **volatility**, and **correlation** metrics to extract trend insights.

Optimal Control of Markov Decision Process | Course Project (Jun'25 - Jul'25)

- Built **optimal control strategies** in MDPs, aligning immediate actions with long-term **reward goals**.
- Solved **MDPs** via **linear programming**, optimizing **policies** to reduce cost and boost **reward efficiency**.

Tools For Algorithmic Trading | WiDS,Analytics Club,UGAC (Dec'24 - Jan'25)

- Designed and deployed end-to-end architecture for a no-code trading platform, utilising the **LangChain library**
- Utilised **vector embeddings** from **Pinecone**, to re-train a **LLM** generating algorithms from user prompt input

ENTREPRENUERSHIP PROJECT

Incubated Entrepreneurial Venture | ClimateVision (Mar'24 – Present)

*Secured a **free-equity grant** of **INR 3 Lakhs** | Pre-Incubated by Desai Sethi School of Entrepreneurship, IIT'Bombay*

- Leading the development of a **data-driven platform** to facilitate India's transition to a **low-carbon economy**
- Helping **Indian cities** track **KPIs** and implement **local decarbonization pathways** across **six core sectors**

POSITIONS OF RESPONSIBILITY

Outreach And Communications Coordinator | Team ZeroWaste, IIT Bombay (Sep'24 - Present)

Team ZeroWaste, a team of 30+ students, consistently strives to embrace and foster the concept of a Sustainable future

- Led **ZeroWaste outreach** at IIT Bombay, forming partnerships to promote sustainable practices around campus
- Surveyed **multiple stakeholders** to assess awareness and improve **zero-waste** practices across the campus

EXTRACURRICULAR ACTIVITIES

- Completed **Bloomberg Market Concepts** certification on Terminal | Economics, Currency, Fixed Income & Equity
- Secured **2nd** place in NSO Tennis League as **Vice-Captain**, fostering collaboration in a competitive environment.
- Secured **2nd** place in the **Freshizza(Dramatics)** competition, showcasing good performance in acting on stage.
- Winner of **Enpro Competition** hosted by **E-CELL IIT Bombay**, pitching a Solution to Expensive Private Bills.
- Secured **3rd** place in **Halloween GC** at IIT Bombay, showing creativity by dressing as a character named Tri-Face.