



Hitaansh Shah
Metallurgical Engineering and Materials Science
Indian Institute of Technology Bombay

21D180016
B.Tech.
Gender: Male
DOB: 10/01/2004

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

Pursuing a Minor degree in **Centre for Machine Intelligence and Data Science**

SCHOLASTIC ACHIEVEMENTS

- Ranked **3rd** out of **135** students in the B.Tech program, demonstrating exceptional academic performance (*Present*)
- Awarded Merit-based Program change to **B.Tech** for exemplary academic performance in the first year . (*'22*)
- Attained an **AA** (given to top 10%) in **12** out of **26** courses (Including **Computer Programming**) (*'Present*)

INTERNSHIPS AND KEY PROJECTS

Unscript.AI | *Deep Learning Intern* (Nov '22 - Jan'23)
Bestowed with a **Letter of Recommendation** for exemplary performance, strong work ethic and professionalism

- Trained a **Wav-2-lip** generative model on CelebHQ dataset to create **lip-synced** videos from a face and audio
- Experimented to employ **pan-sharpening** techniques using **gram-schmidt** which was used to enhance images
- Rewrote **Pivotal Tuning** notebooks on **AWS EC2** servers to ensure scalability and availability of the deployed model
- Extracted directions of a facial beard in a **StyleGAN** latent space which was used to create a bearded dataset

Analysing Options Pricing Models | *Finance Club* | *IIT Bombay* (Jul '23 - Present)
Investigating options markets and **pricing models** along with their fundamental mathematical underlyings

- Analyzing option pricing based on the **Black-Scholes** model and **Monte Carlo** simulations respectively
- Implemented the Monte Carlo Simulation in Python using **risk neutral** pricing strategies using vectorized approach

Image segmentation using U-Net | *Course Project* | *Prof. Biplab Banerjee* | *DS 303* (Apr '23)
Image Segmentation on the **CARVANA** dataset by implementing the U-net architecture in PyTorch from scratch

- Modified the original architecture by introducing **batch normalization** in the convolution layer allowing faster training
- Employed concatenation-based resizing for smoother upsampling dimensions, avoiding center-cropping techniques
- Attained a Validation accuracy of **93.6%**, dice score of **0.95** and a Binary Cross Entropy With Logits loss of **0.122**

POSITIONS OF RESPONSIBILITY

Department Academic Mentor | *Student Mentorship Program* | *IIT Bombay* (May '23 - Present)
Part of a 35-member team selected from 79 applicants based on a stringent interview and peer reviews

- Co-Mentoring **9** sophomores to ensure they have a smooth transition into the academic and social life at IIT Bombay.
- Member of the Events Subgroup in the D-AMP council, responsible for organizing events supporting **300+** undergraduate students from the MEMS department, including internship and placement preparation, and graduate application sessions

Seasons Of Code Mentor | *WnCC*, *IIT Bombay* (May - Jul '23)
Assisting a total of **12** students across various years to complete a Project on Enhancing Images through GANs

- Delivered Weekly Resources from Deep Learning tutorials to the theory behind **Generative Adversarial Networks**
- Conducted Regular meets to address queries, checking mentees' progress and debugging programming errors

TECHNICAL SKILLS

Languages and Softwares	C++, Python, R, MATLAB, SQL, \LaTeX , HTML, Excel, Git, Bash, ThermoCalc
Python Libraries	NumPy, Pandas, Scikit-Learn, OpenCV, PyTorch, TensorFlow, Keras

EXTRACURRICULARS

Misc.

- Attended a two week long Quantitative trading bootcamp by **Optiver** after being amongst top 300 candidates and learnt about options, risk management and decision making. (*'23*)
- Simulated and Submitted **alphas** using various backtesting strategies and moved to Round 2 (Amongst Top **10%** in the world) of the **WorldQuant** Quant-Trading Competition (*'22*)
- Placed 17th in **Codewars** out of 50+ competitive teams that involved programming a heuristic (bot) in **Python** and also propounded the concept of **frontier mechanism** (*'22*)
- Guided mentees to learn and implement a Project on Enhancing Images using Deep Learning (*'23*)
- Mentored a student from **class XII** who qualified the **JEE Advanced** 2022 examination (*'22*)
- Part of a **5-a** side football team that stood **1st** in the intra-school competition twice (*'17-'18*)