



Shreyas Maheshwari
Mechanical Engineering
Indian Institute of Technology, Bombay
Specialization: Thermal and Fluids Engineering

160100013
Dual Degree (B.Tech. + M.Tech.)
Gender: Male
DOB: 21-10-1998

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2021	

Completed a **minor** degree in **Aerospace Engineering**

PROFESSIONAL EXPERIENCE

CME GROUP INC. | SUMMER INTERN | CLEARING HOUSE DIVISION

[May'19 - July'19]

World's leading and most diverse financial derivatives marketplace offering products in all major asset classes

Regulatory Reporting Automation	<ul style="list-style-type: none"> Developed a tool for automation of Total Volume and Open Interest summary report generation for multiple OTC traded products cleared by the Company Reduced the process time by more than 98% which made the operation more efficient
CHOC Quarterly Reporting	<ul style="list-style-type: none"> Created python scripts to generate quarterly spreadsheets for cash flow activity, portfolio allocation, cash deposits by country etc. using openpyxl and pandas libraries

CHASSIS BRAKES INTERNATIONAL | IN PLANT TRAINEE

[Dec'18]

- Studied the complete manufacturing process from foundry to assembly for **disc and drum brakes**
- Identified **two inherent challenges** faced in the foundry and researched about possible solutions to tackle them
- Learnt about different **quality control** and testing methodologies implemented in the industry
- Gained considerable understanding about the **Operations Management** of a big manufacturing facility

KEY TECHNICAL PROJECTS

TRAJECTORY SIMULATION OF A LAUNCH VEHICLE | Master's Thesis

[Dec'19 - Present]

Guide- Prof. Neeraj Kumbhakarna, Department of Mechanical Engineering, IIT Bombay

- Developing a model to compare performance of different **solid rocket propellants** until first stage burnout
- Successfully implemented **PID control** to obtain pitching moments required during the pitch-over maneuver
- Created subsystems to appropriately model aerodynamic, gravitational and thrust forces in **Simulink**
- Optimising the trajectory by utilising **Differential Evolutionary Algorithm** with suitable path constraints

HANDS FREE UMBRELLA | Course Project- Machine Design

[Jul'19 - Nov'19]

Guide- Prof. Ram Kumar Singh, Department of Mechanical Engineering, IIT Bombay

- Proposed a design for a light weight hands free umbrella backed with a proper **cost** and **biomechanical** analysis
- Performed basic **stress analysis** to ensure that the material doesn't fail with a **factor of safety of 10**
- Researched about light materials for the canopy and rods and suggested the use of **Fibre Reinforced Plastics**

POSITIONS OF RESPONSIBILITY

EDITORIAL BOARD MEMBER | Insight, IIT Bombay

[Apr'18 - Mar'19]

*Part of a 20-member team handling the official student media body on campus and responsible for managing the newsletter, circulated to **10,000+ students** and **650+ faculty** members with an online readership of **4 lakh***

- Spearheaded the 'Know Your Prof' interview series, conducting friendly interviews with 6 professors
- Assisted in the ideation and compilation of a special edition article on '**Biodiversity and IITB**'
- Composed a series of commemorative articles to mark the **Diamond Jubilee** of the establishment of IITB

TECHNICAL COUNCILOR | Hostel 15, IIT Bombay

[Aug'16 - Mar'17]

*Elected by the entire hostel with **900 inhabitants**, led the 5-member technical team*

- Started the **first ever Technical Inventory** in the history of Hostel 15, comprising of all the basic technical equipment required for various projects taken up by the residents
- Conducted course help sessions in AutoCAD and Solidworks in the hostel for the inmates
- Awarded **Technical Special Mention** for contribution to the hostel technical scenario

SCHOLASTIC ACHIEVEMENTS

- Scored 194/200 with **state rank 14** (Maharashtra) in MHT-CET among 4 lakh candidates [2016]
- Conferred **KVPY fellowship** with an All India Rank **257** conducted by DST, Government of India [2016]
- Awarded National talent Search Scholarship (NTSE) by **NCERT**, New Delhi with an **AIR 75** [2012]

SKILLS AND INTERESTS

- Programming Languages:** Python, MATLAB, C++
- Software skills:** Simulink, ANSYS, DesignBuilder, SOLIDWORKS, AutoCAD, Audacity
- Interests:** Enthusiastic about numismatics, chess, reading (fiction), music and football