Parsana Vivek Navinbhai   **210010047**
Aerospace Engineering   **B.Tech.**
Indian Institute of Technology Bombay   **Gender: Male**
DOB: 30/05/2003

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2025	
Intermediate	Gujarat Secondary & Higher Secondary Education Board	Shree Saraswati Madhyamik & Uchhatar Madhyamik Shala	2021	92.46%
Matriculation	Gujarat Secondary & Higher Secondary Education Board	Shri Chanakya Madhymik Shala	2019	91.50%

Pursuing minor degree in **Computer Science and Engineering** *at IIT Bombay*

SCHOLASTIC ACHIEVEMENTS

- Currently **ranked 8th** academically in a class of 77 in the Department of Aerospace Engineering
- Cleared **Jawahar Navodaya Vidyalaya** Examination (held by Government of India) *(2014)*
- Participated in **state level** camp at **Vidyarthi Vigyan Manthan Examination** *(2020)*
- Secured **96.69** percentile out the of 0.15 + million candidates who appeared for **JEE Advanced** *(2021)*
- Secured **99.59** percentile out the of 0.85 + million candidates who appeared for **JEE Mains** exam *(2021)*

KEY PROJECTS

Collide | Season of Code *(May'23-July'23)*
Web and Coding Club | IIT Bombay

- Developed a **Game Engine** with **SDL2** and a robust physics framework with broad phase collision detection
- Implemented detection and **Resolution Algorithm**, and **Graphics** for the game to look visually stunning
- Developed and executed an interactive **Neon Blaster Game**, incorporating dynamically generated objects with diverse **Health Levels** and a **Player-Controlled Gun** to offer a stimulating gameplay encounter
- Successfully integrated a comprehensive framework into the game engine, ensuring accurate **Collision Detection and Resolution** for seamless interaction between objects and the player's projectiles.

Effect of COVID on flight Industry | Course Project *(Mar'22-July'22)*
Guide: *Prof. Amuthan A. Ramabathiran* | Department of Aerospace Engineering *(IIT Bombay)*

- Worked in team of **4** and **collect data** of different countries to determine effect due to COVID on **Airlines**
- We analyze the effect through **hypothesis testing** and determine which country affected most during Cov'19
- We represent information in nice **Python** code and notebook using **Matplotlib**, Pyplot, **Panda**, & **NumPy**

Data Driven Astronomy | Winter in Data Science Project *(Dec'22)*
Analytics Club | IIT Bombay

- Proficient in web scraping using the **BeautifulSoup** library to extract data from websites directly.
- Experienced in working with the **Astropy Library** and **Sigma-Clipper Statistics** for importing and analyzing FITS files and identifying peaks and reducing noise respectively along with **Curve-Fit** library
- Experienced in machine learning, specifically using **Decision Tree Regression** to predict and process data
- Skilled in galaxy classification through **Machine Learning** algorithms for precise and efficient categorization

Network Security | Summer of Science *(May'23-July'23)*
Math and Physics Club | IIT Bombay

- Acquired comprehensive knowledge of **Computer Networks**, **Protocols**, and **Standards**, along with proficiency in line configuration and **Transmission Modes**, during the initial weeks of the project.
- Explored network security fundamentals, **Cryptography Principles**, message integrity, digital signatures, and **End-Point Authentication**, demonstrating a strong foundation in network security concepts.
- Developed expertise in securing various network components, including TCP connections, **Wireless LANs**, and web security, while also gaining practical experience with operational security tools like firewalls and IDS

Analysis of Aircraft Engine | Course Project *(Jan'23-Apr'23)*
Guide: *Prof. Krishnendu Sinha* | Department of Aerospace Engineering *(IIT Bombay)*

- Done in-depth research on the development, operations, and important features of the **TP400 Engine**
- Extract and comprehend **Technical Specifications** and details from reliable sources, such as Wikipedia, to understand the qualities and capabilities of the engine and aircraft, did calculations with its parameters
- Presented an in-depth knowledge of **Propulsion Systems** and the ability to use thermodynamic concepts to analyze engine performance by estimating the **Thrust** and **TSFC** produced by the TP400 engine

GSLV MAK III analysis | Course Project *(Jan'23-Apr'23)*
Guide: *Prof. Amuthan A. Ramabathiran* | Department of Aerospace Engineering *(IIT Bombay)*
- Worked in a 5-member team, analyze flow for **Payload Fairing** and structure of **Payload Adaptor**
- Successfully crafted structural **Models** of payload fairing and adaptor using cardboard, sticks and 3D printer

Equity Research Competition *(Sep'22)*
Finance Club | IIT Bombay
- Study the stock of company via **SWOT**, qualitative and valuation analysis, and peer comparison
- Analyse the indicator like **PE**, **EBITDA**, EPS, PB and Quick ratio via **Quantitative Analysis**
- Predict future of stock using current economic trend and performance of the company in the quarter

XLR8 Remote Control Bot Competition *(Aug'22 - Sep'22)*
Electronics and Robotics Club | IIT Bombay
- Worked in a team of **4** and Built a fully functionalized **WIFI controlled bot**, able to conquer obstacles
- We use **electrical component** like **L293D** motor driver, **ESP32** receiver and **LM2596** buck converter
- We also **design a web server** with **HTML, CSS,** and **Javascript** for controlling the bot through mobile
- Designed web server has functionalities like turleSim, by one click its completes shapes like circle, star, eight

TECHNICAL SKILLS

- **Programming:** DSA,C++, Python, HTML, CSS, C, MySQL
- **Office tools:** Microsoft Office, LaTeX

INTERNSHIP

Business Development and Strategy Intern | Yodacart *(July'22)*
- Developed strategies for driving sales through various channels and planning for Delhi - Bangalore expansion
- We worked in a team of 2 and Negotiated with **70+** retail shops across Mumbai for opening experience center

POSITIONS OF RESPONSIBILITY

Event and Competition Coordinator | Zephyr Aviation Festival *(Dec'22 - Mar'23)*
Department of Aerospace Engineering | IIT Bombay
- Successfully organized a Kite Making Workshop and Kite Flying Event for campus students, Ensured a smooth execution of the event, resulting in high participation and positive feedback from attendees
- Took an active role in the **Publicity** of the events and workshops by visiting coaching centers in Thane
- Selected as the **Marketing Manager** for the upcoming year 2023-24 fest, Will collaborate with **Cross-Functional Teams**, and work towards maximizing attendee engagement and overall event success

Project Marketing Manager | Team Veloce Hyperloop, IIT Bombay *(June'22-Apr'23)*
- Analyzed the present hyperloop market of **1.3 B USD** and studied **potential future markets** and growth
- Working in a **3-tier** cross-functional team, **Analyzing 50+ companies** and individuals for project sponsors
- Conceptualizing and **Executing** brand integration for **Excellent Brand** value in global tech community

Events Organiser | E-Cell, IIT Bombay *(Nov'21 - Apr'22)*
Asia's largest Entrepreneurship promoting student body by NEN | patronage from UNESCO
- Successfully executed **Incubator Summit**, which was organised for the first time in **E-Summit of E-Cell**
- Worked in a team of 20+ members and coordinated with **15+ Incubators** from their registration till the last
- Brought registrations of **150+** startups in the event out of which **35+** got selected for incubation process
- Supervised the interview process of the startups and ensured smooth functioning of the event on the final day

KEY COURSES UNDERTAKEN

- **Programming Course:** Data Structures and Algorithms, Logic for Computer Science, Computer Programming and Utilization, Data Analysis and Interpretation
- **Core Courses:** Introduction to Aerospace Engineering, Incompressible Fluid Mechanics, Thermo dynamics and Propulsion, Solid Mechanics, Aircraft Propulsion, Aerospace Structural Mechanics, Compressible fluid mechanics, Flight Mechanics, Aerospace Measurement Laboratory

EXTRACURRICULAR ACTIVITIES

Sport	• Represent the hostel 5 as a team in the volleyball **General Championship** (2023) • Win a bronze medal in volleyball intra-department tournament held by AEA council (2023) • Completed an year-long training in **Cricket** under **National Sport Organisation**
Miscella-neous	• Like to explore **Outdoor Sports, Traveling, Cooking** • Participated in EnB Buzz **Business Model**-making competition(IIT Bombay)