



Ayush Chomal
Aerospace Engineering
Indian Institute of Technology, Bombay
Specialization: Aerospace Structures

193010029
M.Tech.
Gender: Male
DOB: 10-04-1996

Examination	University	Institute	Year	CPI / %
Post Graduation	IIT Bombay	IIT Bombay	2021	7.62
Graduation	Rajasthan Technical University	Global Institute of Technology, Jaipur	2018	72.19%
Graduation Specialization: Mechanical Engineering				
Intermediate	CBSE	Birla School, Kalyan	2014	86.00%
Matriculation	CBSE	Birla School, Kalyan	2012	92.40%

SCHOLASTIC ACHIEVEMENTS

- Secured **AIR-823** in **GATE 2019** in **ME**, amongst 167376 candidates Nationwide (approx. **99.05 Percentile**).
- Secured **AIR-5523** in **GATE 2018** in **ME**, amongst 194496 candidates Nationwide (approx. **97.16 Percentile**).
- Obtained an **Overall Percentile** of **94.49** in CAT 2018, with **98.69 Percentile** in Quantitative Ability.
- Obtained an **All India Percentile Score** of **98.71** in **JEE (MAIN)-2014** Paper 1.
- 1st Rank** from School with a percentile of **92.81** in **10th National Cyber Olympiad, 2010**.

PROJECTS, SEMINARS AND COURSE PROJECTS

Aeroelastic Tailoring of Composite Wings | M.Tech. Project [Aug'20-Present]

Guided by Prof. Abhijit Gogulapati, IIT Bombay

- Structural modelling of high aspect ratio, geometrically non-linear, **composite wings** with arbitrary C/S.
- Unsteady aerodynamic load prediction using a finite state approximate formulation for aerofoils & wings.
- Aeroelastic Tailoring** of geometrically non-linear, composite wings using **numerical optimisation tools**.

Aeroelastic Tailoring | M.Tech. Seminar [Aug'20-Present]

Guided by Prof. Abhijit Gogulapati, IIT Bombay

- Review of literature on Aeroelastic Tailoring and the application of high aspect ratio **composite wings**.

Aeroelastic Response and Divergence Analysis of XB-47 Bomber | Aeroelasticity [May'20-Jun'20]

Course Project Instructor: Prof. P.M.Mujumdar

- Formulated the coupled torsional-bending differential equations of swept back non-tapered wing.
- Implemented beam and **corrected strip theory** for Structural and Aerodynamic Analysis respectively.
- Developed **MATLAB** code to predict Aeroelastic Responses & Divergence, using **Finite Difference Method**.

Design of Plate of Roller Skates using Composite material [Nov'19]

Course Project Instructor: Prof. Y.Chandra Sekher

- Designed Plate of the Roller Skates using **UD Composite Laminate** with assumed material properties.
- The analysis was based on Euler Beam Theory and Classical Laminate Theory, assuming plate as beam.
- Calculated number of plies required based on first ply failure and by constraining dimensions of each ply.

Design and Construction of Glider | Introduction to Flight [Sep'19]

Course Project Instructor: Prof. Rajkumar S. Pant

- Worked in a team of 8 members to design and fabricate 2 gliders, for maximum range and endurance.
- Constructed few other models for testing purposes, and made changes to improve their performance.

Quad-copter and 2-D Sketcher | B.Tech. Project [Sep'17-May'18]

- Worked and coordinated in a team of 13 to create two projects.
- Constructed a light, rigid, cheap frame for a working Remote Control Quad-copter with flight controller.
- Constructed a 2-D Sketcher using 2 old-DVD drives, which operated through laptop and **arduino** chip-set.

Stealth Technology | B.Tech. Seminar [Apr'18]

- Presented information about basic Stealth Technology, to a class of 50+ Mechanical Engineering Students.

INTERNSHIP

Aircraft Division, Hindustan Aeronautics Limited, Bangalore | B.Tech. Summer Internship [May'17-Jun'17]

- Observed and studied mass manufacturing processes and assemblies in an aircraft industry.
- Studied about jigs & fixtures used for interchangeability for parts, tools, fuselage and wing assemblies.

KEY COURSES

Graduate Level	Eng. Thermodynamics Operations Research	Fluid Mechanics Industrial Engineering	Heat Transfer Mechatronics	Design of machine elements Material Science & eng.
Post-Graduate	Continuum Mechanics Finite Element Method	Structural Dynamics Aerospace Structures	Aeroelasticity Fiber Rein. Composites	*ML based Uncertainty Quantification for Composite

ONLINE COURSES

Machine Learning* | Coursera | Stanford University | Andrew Ng
 Introduction to Data Science in Python* | Coursera | University of Michigan
 Successful Negotiations: Essential Strategies & Skills | Coursera | University of Michigan

*-Ongoing

TECHNICAL SKILLS

Languages C, C++ (Certified by NIIT), Python, MATLAB, Octave, LaTeX
Tools/Softwares Maple, AutoCAD (certified by CAD Desk), ANSYS (Workbench), SolidWorks
Operating System Windows, Linux

POSITION OF RESPONSIBILITY

Teaching Assistant | Optimisation for Engineering Design [Jan'20-Jun'20]

Instructor: Prof. Gopal R. Shevare and Prof. Abhijit Gogulapati

- Assisted in conducting quizzes and course project presentations for **60+ students**.
- Had personally **counselled** team-4 (pertaining of 8 students) in their course related matters.
- Evaluated** students (especially team-4) in course project presentation.

Teaching Assistant | Structural Dynamics [Aug'20-Present]

Instructor: Prof. Abhijit Gogulapati

- Assisted in conducting quizzes, course assignments and presentations for 80+ students.
- Handled** functions on MS Teams and Moodle, and **conducted** tutorial and doubt sessions.
- Personally oversaw a group of 10 students for smooth functioning of course.

Department Placement Coordinator | Institute Placement Team | IIT Bombay [Jul'20-Present]

- Created** an organised medium on an online platform for **50+ members**, for communication & information.
- Conducted online Resume verification process for **1500+ students** along with 50+ DPCs.
- Conveyed information regarding department curriculum, courses, research work, in line with companies' profile, through posters.

Class Representative | Aerospace Structures, Department of Aerospace Engineering [Aug'19-Present]

- Mediated** information between a class of 15 students and Professors on course related matters.
- Worked with OCR and 3 CR's of Aerospace department to conduct different department activities.
- Counselled Structures specialisation students from current batch as well as junior batch.

Interview Coordinator | Institute Placement Team | IIT Bombay [Nov'19-Dec'19]

- Coordinated with a team of **250+ members** for interviews of **1600+ students**.
- Assisted in conducting Pre-placement Talks and Tests for **15+ firms**.

Class Representative | Mechanical Department | GIT, Jaipur [Jan'16-May'17]

- Represented a class of **50+ students** and mediated between Department and students.
- Assisted the Professors in coordinating with students during Department Industrial Trip.

EXTRA-CURRICULAR ACTIVITIES

Technical	<ul style="list-style-type: none"> Zonal winner for Robotics Competition of NRC 2013-2014. 	
Managerial	<ul style="list-style-type: none"> Managed students for Science model exhibition on National Science Day. Coordinated Transportation services for MNIT'91 Silver Jubilee event at Clarks Amer. Volunteered in event Rendezvous, conducted by Hacktrack India. 	<div>[Feb'18]</div> <div>[Dec'16]</div> <div>[Nov'15]</div>
Social	<ul style="list-style-type: none"> Donated Blood for TATA Memorial Hospital in an event held at IIT Bombay. Volunteered for event conducted by NGO, "Pallavan, Blooming Lives". Donated Blood in an event held at GIT, Jaipur, organised by Rotary Club Jaipur. 	<div>[Oct'19]</div> <div>[Oct'16]</div> <div>[Apr'16]</div>
Cultural/Sports	<ul style="list-style-type: none"> Participated in IITBombay Half Marathon (organiser: FITIZEN & AAVHAN). Participated in Techfest Cyclothon, organised by Techfest, IIT Bombay. Completed Sangeet Bhushan (Tabla), conducted by Pracheen Kala Kendra. 	<div>[Oct'19]</div> <div>[Oct'19]</div> <div>[May'10-Apr'13]</div>