	Mitanshu Sharma	09001014
	Aerospace Engineering	UG Third Year (B.Tech.)
	Indian Institute of Technology, Bombay	Male
		DOB: 14.10.1990

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2011	7.63
Intermediate/+2	CBSE	L.B.N Sr. Sec. School	2008	75.60
Matriculation	CBSE	L.B.N Sr. Sec. School	2006	84.40

Scholastic Achievement

- Secured All India Rank 1255 (out of 3,85,000 appeared) in **JEE** (2009)
- Secured All India Rank 545 (out of 9,62,000 appeared) in **AIEEE** (2009)

Research Work

Analytical Study of Shock Turbulence Interaction (2010-'11)

Guide: - Prof. Krishnendu Sinha
- Objective was to simulate behavior of turbulent flow in the proximity of shock using Rapid Distortion Theory and Linear Inviscid Analysis
- Developed a code using **FORTRAN** for same by analyzing **Reynold Stress Tensor** and comparing it with existing DNS solutions with the help of **TECPLOT, Matlab and Livegraph**

Theoretical analysis of Stability and Transition in Shear flows (Summer 2011)

Guide: - Prof. Krishnendu Sinha
- Objective was to study the behavior of perturbation in a shear flow by non-modal Theory
- Done rigorous algebraic manipulation to solve fourth order differential equation in Time and Space

Academic Projects

Conceptual Design of a Multipurpose Tool

Guide: - Prof. P.M Mujumdar, Prof. Hemendra Arya, Prof. K. Sudhakar
- Build conceptual design of a multipurpose tool (drawing and writing purpose)
- Learned **QFD method** to relate technical requirement with customer requirement

Fingerprint registration and recognition software
Guide: - Prof. D.B Phatak
- Image Processing and elaborate data analysis and handling using C++
- Included Fingerprinting data collection and verification

Technical Projects

- Made powered remote controlled aircraft from balsa wood
- Built a non-powered aircraft **Chuck Glider** which we have made by using balsa wood and learned the basic concepts of aerodynamics
- Secured a 11th position (out of more than 90 teams) in **Wireless Racing Car** which uses RF circuit and some basic concepts of electronics

Professional Skills

Programming Language: - C/C++, Python, FORTRAN
Software Packages: -
- **Computer algebra Software**: - Maple, Mathematica, Maxima
- **Technical Computing Software**: - Matlab, Scilab, Pylab, Ansys, Fluent, Gambit, Solidworks, Gridgen, LabVIEW

- **Plotting Software**: - LiveGraph, GraphThing, TecPlot
- **Other Packages**: - LaTex, MS Office, OpenOffice, Adobe Photoshop, Adobe Dreamweaver, Windows Movie Maker

Operating System: - Windows 7, Vista, XP, Ubuntu

Relevant Courses

Specialised Courses: - Computing of High Speed Flows, Propulsion, Aerodynamics, Software Development for Engineers and Scientist

Core Courses: - Engineering Design, Fluid Mechanics, Thermodynamics, Introduction to Flight Mechanics, Solid Mechanics, Aerospace Structural Mechanics, Control Theory

Minor Courses: - Classical Mechanics, Introduction to Quantum Mechanics, Thermal and Statistical Physics

Other Important Courses: - Integral Calculus, Differential Equations, Linear Algebra, Introduction to Numerical Analysis, Computer Programming and Utilization, Overview Of Macro and Micro Economics, Data Analysis And Interpretation

Lab Courses: - Aerospace Measurement Laboratory, Modelling and Simulation Laboratory, Experimentation and Measurement Labs, Engineering Graphics and Machine Drawing, Aircraft Structures Laboratory, Control Systems Laboratory

Position of Responsibility

Council Member of Aerospace Engineering Association, IIT Bombay (2011-'12)
Manager (Logistics) of Zephyr'12 (2012)
Coordinator, Techfest, Competitions (2010-'11)
- Worked and co-operated with other co-ordinators and also with 2 core team members
- Send invitation to various colleges for their participation in **Aviator** to fly their brilliant designs of remote controlled planes

Coordinator, Mood Indigo, Informals (2010-'11)
- Worked and co-operated with other co-ordinators and also with 1 core team member
- Handled **Adventure** event having four sub-events

Extra-Curricular Activities

Cultural
- Awarded PAF Color (2011) for exemplary contribution to Performing Art Festival of IIT-B
- Important member of Prod and Fine-Art(FA) teams in PAF'11 which secured 1st position
- One of the Actors of the Main dramatics and Advertising making General Championship
- Participated in Book Cover General Championship

Social
- Taught poor children under **Educational Outreach Programme (NSS)** (2009)
- Had two trips in rural areas under **Group Rural Activities Programme (NSS)** and wrote a report on the problems faced by the villagers (2009)

Sports
- Participated in Tug of War General Championship