Ashish Rathi **08D10013**
Mechanical Engineering **UG Third Year(Dual Degree)**
Indian Institute of Technology, Bombay **Male**
Specialization: Computer Aided Design (CAD) & Automation **DOB: 29/03/1990**

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2010	8.06
Intermediate/+2	Maharashtra State Borad	Somalwar Junior College	2008	86.67
Matriculation	Maharashtra State Borad	Hadas High School	2006	89.33

ACADEMIC ACHIEVEMENTS

- Secured an All India Rank (AIR) of 520 in the national level entrance exam for the IITs.
- Secured an AIR of 150 and State Rank of 10 in the national level AIEEE, 2008.
- Plaque winner (along with only 5 others in India) for excellence in chemistry in the **Australian National Chemistry quiz** (2005).
- Among the top 0.1% students short-listed for the **International Chemistry Olympiad** (2008).
- Amongst the top 1% students in the **National Standard Examination in Physics** (2007 and 2008)**.**
- Ranked 49th and 444th in the country in the year 2008 and 2007 in the **National Science Olympiad.**

EXTRA – CURRICULAR ACTIVITIES

Manager, Events, Techfest 2010-11

- Working in a core organizing group of 22 students for Techfest 2011 – **Asia's Largest Science and Technology Festival.**
- Leading a two-tier team of 180 students to conceptualize and execute events.
- Executed an initiative **'Green Campus – First Eco-Friendly Model'** for a campus in India which involved implementation of various environment friendly projects in the institute.
- Organizing an electricity saving competition among the 6 largest institutes of India.
- Executing a nation-wide campaign **'India Unmute'** which involves a diary going to 65 top colleges of India and taking ideas for a change on the various issues facing India from students.

Hostel Mess Secretary, **2009-10**

- Worked as the mess secretary of my hostel and managed the messing facilities for 400 students.
- Awarded Special Mention for the extraordinary work.

KEY COURSES UNDERTAKEN

Department Courses (Mechanical Engineering) –

- Advanced Manufacturing Process
- Solid Mechanics
- Introduction to Optimization
- Thermodynamics
- Fluid Mechanics
- Engineering Metallurgy
- Heat Transfer
- Manufacturing Process
- Modeling of Dynamical Systems
- Strength of Materials
- Engineering Mechanics
- Engineering Graphics and Drawing

Mathematics –

- Data Analysis and Interpretation
- Linear Algebra
- Numerical Analysis
- Differential Equations
- Calculus

Other Courses –

- Marketing Management
- Introduction to Computer Programming And Utilization
- Human Resource Management
- Introduction to Electrical & Electronics Circuits

- Introduction to Renewable Energy Technology
- Introduction to Economics
- Industrial Economics

COURSE PROJECTS

An Analysis of the Marketing Strategies of IBM

- Worked in a group of 5 to do a detailed analysis on strategies employed by IBM for marketing its products and services in India and designed a marketing strategy for a new product for the same.
- Proposed carbon accounting of companies and ways to reduce it so that they can sell carbon credits to other companies as IBM's new product and designed a thorough marketing strategy for the same.
- Under the Guidance of Prof. Dinesh Sharma.

Material Selection and Design

- Carried out an intensive research on the properties required and the material used for making blade of a power saw and suggested an alternative for the same.
- Learned the practical difficulties faced during the designing and fabrication of product and proposed methods to overcome these difficulties.
- Under the Guidance of Prof. G. V. Prabhugaonkar.

Digital Diary Software

- Developed a Digital Diary with features such as Phonebook, Calculator and Tic-tac-toe game using C++.
- Simulated the software to make it fast and user friendly.
- Under the Guidance of Prof Abhiram Ranade.

PERSONAL PROJECTS

Vertical Wall Climber

- Built a wheeled car which could run on horizontal surface as well as climb metal sheet walls. The car used IC L293D for motion along surface and magnets provided the normal force for climbing metal sheet.
- Trialed and experimented with various mechanisms of wall climbing along with horizontal motion and their advantages and disadvantages against one another.
- Learnt about the future possibilities in rock climbing and rescue of mountaineers.

Line Follower

- The line-following was implemented using LED-Photodiode sensors and basic logic circuit
- Designed a circuit and experimented with different photodiodes sensors and the use of potentiometer as a potential divider
- Understood the application of this method in tracing of paths and future of computer-controlled cars

Wireless car

- Constructed a wireless, battery powered four wheeled toy car. The car used differential mechanism for turns and RC circuit for wireless communication.
- Studied about the different turning mechanisms in toy cars and its application in real cars.

ELECTRONIC AND COMPUTER SKILLS

- Programming Language – C, C++ and HTML.
- Learning Java.
- Operating Systems used: Linux, Windows.