



GAURAV BHARTI
Mechanical Engineering
Indian Institute of Technology, Bombay
Specialization: Computer Aided Design (CAD) & Automation

09D10024
UG Third Year(Dual Degree)
Male
DOB: 25.09.1990

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	7.62
Intermediate/+2	CBSE	Delhi Public School, Bokaro	2008	92.60
Matriculation	CBSE	BR DAV Public School, Barauni	2006	95.00

Scholastic Achievements

- Secured the Percentile of 99.42 in IIT-JEE 2009 out of around 0.4 million students appeared.
- Secured the Percentile of 99.95 with All India Rank of 469 and State Rank 9 in AIEEE 2009 out of 1 million students appeared.
- In National Science Olympiad 2005, was awarded Gold Medal for securing 27th rank all over India.

Internships

Modeling and Simulation, ThEt, Universität Paderborn, Germany May'11-July'11

- Involved in the extensive research on the thermo-physical properties of the mixture like excess properties (Excess Enthalpy and Excess Volume) and vapour liquid equilibria through molecular simulation technique.
- Molecular models of various compounds like Water, Methanol, Ethanol etc. were studied and programmed.
- Molecular Simulation was performed for around 250 binary mixtures using MS2 and the simulated results were plotted with the experimental results and the domain of MS2 for predicting thermodynamic properties was studied and analyzed.

Curriculum Development, Children Technology Workshop, Mumbai Dec'10

- Involved in the curriculum development of robotics for children of age 9-14. It involved building and testing robots projects using lego mindstorms with the R&D team of CTW.
- Developed my designs and CAD representation building tutorials of a pole climber robot using lego which was the problem statement of IRO 2010.

Key Academic/Research Projects

Pizza Shop Modeling, Simulation & Optimization, Industrial Engineering, IIT Bombay July'11-Nov'11

- Under guidance of Prof. J. Venkateshwaran, made a simulation model of a pizza shop in Anylogic® and optimized various parameters so as to get customer satisfaction level to 90-95%.

Micro-machine Tool Development, Mechanical Engineering, IIT Bombay July'11-Nov'11

- Under the guidance of Prof. Ramesh Singh, studied various aspects of micro-machining and suggested the further improvements in the technique to increase the accuracy of the process.

Role of Materials in Joint Replacements, Metallurgical Engineering & Material Science, IIT Bombay July'10-Nov'10

- Under guidance of Prof. G Prabhugaunkar, made project to identify different materials to be used in joint replacements of bones.
- It involved identification of the crucial properties and comparison of candidate materials and predicting the best based on performance index.

Mental Imagery and Performance, Humanities and Social Science, IIT Bombay July'10-Nov'10

- Under guidance of Prof. A Khan, made a project and done a survey to study and analyze various factors to determine the relationship between mental practice and performance.

Unique User Identification using C++, Computer Science and Engineering, IIT Bombay July'09-Nov'09

- Under guidance of Prof. D B Phatak, made a group project for unique user identification using finger print detection using C++.
- Was involved in development of algorithm and code for fingerprint matching by minutiae detection and forming of template of the finger print.

Seminar

Liver surgery planning using Virtual Reality, Mechanical Engineering, IIT Bombay July'11-Nov'11

- Under guidance of Prof. K P Karunakaran, did a theoretical study of different stages of liver surgery planning using virtual reality and delivered a seminar on the same.

Key Courses Undertaken

Department Oriented Subjects

- Solid Mechanics
- Engineering Mechanics
- Strength of Materials
- Kinematics and Dynamics of Machines
- Robotics
- Engineering Metallurgy
- Manufacturing Processes
- Rapid Product Development
- Applied Thermodynamics
- Fluid Mechanics
- Heat Transfer
- Fuels and Combustion
- Industrial Engg. and Operations Research
- Energy Sources and Utilisation
- Discrete Event System Simulation
- Introduction to Electrical & Electronics Circuits
- Introduction to Industrial Design
- Manufacturing Process Lab*
- Engineering Graphics & Drawing*
- Solid Mechanics Lab*
- Economics
- Human Cognitive Process

IT Oriented Subjects

- Computer Programming and Utilization

Note: Courses marked with * indicate a Lab component.

Positions of Responsibility

Cultural Councilor, Hostel 7, IIT Bombay

Mar'11-Present

- Leading a team of 10 cultural secretaries and strengthened our overall position in Cultural General Championship to 3rd as compared to 9th of last year and also led the hostel to 1st position among all Non-fresher hostels.
- Conceptualized the idea of Hostel Fest and Initiated "7 Up" with 9 events spread across a weekend. This was first ever hostel fest in the history of Hostel 7.
- Managed the cultural budget of around 1 Lakh over the year and revamped Hostel Music Room & Library.
- As a part of member of Hostel Council and Institute Cult Comm, has contributed in decision making in various issues.

Coordinator, Infrastructure, Techfest 2011

May'10-Jan'11

- Managed all infrastructural requirements ranging from power plugs to Huge Hanger in Exhibition in KV ground.

Social Secretary, Hostel 7, IIT Bombay

Aug'10-Mar'11

- Planned and organized around 15 Social Events including Indian festivals and various social games and Intra around the year.
- Designed the Hostel T-Shirt and posters for all events in the hostel.

Software Skills

Languages	C++, HTML, SQL
Operating System	Windows, Linux.
Softwares	MS-Excel, MS-Access, MATLAB, Sigma Plot, SciLab, MS2-Simulation

Extra-Curricular Activities

PAF Color	<ul style="list-style-type: none">• Had actively participated in designing and structuring of the Prod for the PAF 2011 "Chasm-e-num" and was awarded PAF color for the same.
Adventure Sports, ABVIMAS, Manali	<ul style="list-style-type: none">• Completed 15 days of Basic Mountaineering Course, Manali'10 and was trained for rock climbing, Wall climbing, Jumaring, Rappelling, trekking, snow crafting and different type of knots.
Most Disciplined Boy, BR DAV Public School	<ul style="list-style-type: none">• Was awarded with "Most Disciplined Boy" of the school in year 2003.
Movie Making	<ul style="list-style-type: none">• Active member of Silverscreen, the Film Club of IIT Bombay.• Was a part of the creative and technical crew of several short films made in the Institute.• Was Editor of the Movie "Drugs Dosti Etc" which secured 2nd position in Movie making competition in Freshizza'09.