



Vijay Mahawar  
Mechanical Engineering  
Indian Institute of Technology, Bombay  
Specialization: Computer Integrated Manufacturing

09D10023  
UG Third Year(Dual Degree )  
Male  
DOB: 25 Oct 1991

| Examination     | University              | Institute                         | Year | CPI / % |
|-----------------|-------------------------|-----------------------------------|------|---------|
| Graduation      | IIT Bombay              | IIT Bombay                        | 2012 | 5.82    |
| Intermediate/+2 | Rajasthan Board (Ajmer) | Shiv Jyoti School Kota(Rajasthan) | 2009 | 81.69   |
| Matriculation   | CBSE                    | Childrens Academy                 | 2007 | 86.48   |

## CAREER OBJECTIVES:

- To achieve a sound understanding of all aspects of **Project Execution**.
- To work and contribute in the field of **Mechanics, Automation, Manufacturing, Industrial Operation, Planning and Management**.

## KEY PROJECTS UNDERTAKEN:

|  |   |
|--|---|
| <b><u>Research on Internal Combustion (IC) engine for Biodiesels.</u></b><br><b><u>(Dec 2010 to Jan 2011 )</u></b> | <ul style="list-style-type: none"><li>• <b>Analyzed</b> thoroughly the different parameters of the Internal Combustion Engine (Type AV1 Vertical stationary, DI, water cooled, B1 class governing) like <b>Specific Fuel Consumption, Brake Mean Effective Pressure, Specific Power Output, Specific Weight Exhaust Smoke and Other Emissions</b>.</li><li>• <b>Performed</b> the experiment for two <b>Biodiesels (Jatropha and Karanja)</b> and computed the mechanical efficiency and made a report for the future feasibility of the biodiesels for IC Engines.</li></ul> |
| <b><u>Fabrication of Micro Machining Tools (July 2011 to Nov 2011)</u></b>   | <ul style="list-style-type: none"><li>• <b>Analysed</b> the materials (<b>tungsten carbide, diamond tool, cobalt</b>) for the cutting tools for micro machining. <b>Micro structural studies</b> of the various materials have been done.</li><li>• Worked on the machine construction materials(<b>Polymer concrete, Cast Iron, steels etc.</b>) along with the machine geometry (<b>Bridge Frame and C-Frame</b>)</li></ul>   |
| <b><u>UNIQUE USER IDENTIFICATION</u></b><br><b><u>(July 2009 – Nov 2009)</u></b>                                   | <ul style="list-style-type: none"><li>• <b>Developed</b> a program in a group for the <b>Unique User Identification</b> using Finger Prints for the purpose of Class Attendance using the programming language C++ under the guidance of <b>Prof. Deepak. B. Phatak</b> (senior faculty, Computer Science Engineering Department)</li></ul>   |
| <b><u>Wheel Rim Design(Material Science Project)</u></b><br><b><u>(Aug 2010-Nov 2010)</u></b>                      | <ul style="list-style-type: none"><li>• <b>Worked on</b> the most efficient and optimistic materials for the car's wheel rim design at micro level to understand the <b>Strain Stress Relationship and Fatigue</b> at different loads and conditions as an In Semester Project.</li><li>• <b>Analyzed</b> the materials (<b>Magnesium Alloys</b>) and different methods for the production of the wheel rims for cars like <b>Forging, High Pressure Die Casting, Low Pressure Casting, Gravity Casting</b></li></ul>   |

## INDUSTRIAL TRAINING:

### Internship at National Thermal Power Corporation (NTPC), New Delhi (India) (Dec-2011)

- **Was assigned** in the Boiling Maintenance Department (**BMD**), Plant Auxiliary Maintenance (**PAM**) and Turbine Maintenance Department (**TMD**) which are the three essential parts of the plant.
- **Thoroughly** inspected the properties and conditions of **coal (Pulverized coal)** used in BMD as a fuel from **Raw Coal Bunkers**, demineralized water from the water treatment plant, **superheated steam** properties and desired temperature and pressures before entering into turbines.
- **Thoroughly examined** the different stages of condensers, LP and HP heaters, Deaerator, Boiler Auxiliaries.

### **Internship in Indian Railways at Coach Care Centre, New Delhi (India) (June - July 2011)**

- **Inspected** the **Design and Braking System** of new Linke Holfmann Bush (LHB) coaches of India's fastest trains Rajdhani and Shatabdi Expresses.
- **Interpreted** thoroughly the difference between in **Air and Vacuum Brake System**.
- **Examined** the amount of **Pressure Drop in the Distributive Valve(DV)** (one of the most important component of Train's Braking System) corresponding to the **Train's Speed and Covering Distance** before come to rest

### **COMPUTER PROFICIENCY:**

|                                      |   |
|--------------------------------------|---|
| <b><u>Computer Languages</u></b>     | Programming experience in basic <b>C and C++</b> Language.                        |
| <b><u>Operating Systems</u></b>      | End user experience with windows packages <b>Linux, XP, VISTA, WINDOWS</b>        |
| <b><u>Simulation Languages</u></b>   | MATLAB, R for Discrete Event Simulation, Scilab.                                  |
| <b><u>Designing and Packages</u></b> | MS Office (Excel, Word and PowerPoint), <b>Auto CAD</b> , Adobe Photoshop, Vegas. |

### **POSITION OF RESPONSIBILITY:**

|   |  |
|---|--|
| <b><u>Hostel Maintenance Secretary(2010-2011)</u></b> | <ul style="list-style-type: none"><li>● <b>Maintained</b> the hostel's basic facility and kept all the daily/weekly/monthly essential and nonessential work regular and brought new <b>Initiatives</b> which shows <b>Management Skills</b>.</li><li>● <b>Planned</b> to use the <b>Hostel Fund</b> of around Rs 3lacks in a most effective way for the welfare of the Hostel's different aspects.</li></ul> |
| <b><u>Coordinator Mood Indigo 2010</u></b>            | <ul style="list-style-type: none"><li>● <b>Coordinated</b> all the arrangements of the Food and Beverages department of the Institute's Annual Cultural Festival.</li></ul>  |
| <b><u>Coordinator Tech Fest 2011</u></b>              | <ul style="list-style-type: none"><li>● <b>Coordinated</b> all the arrangements of the Competition Department of the Institute's Annual Technical Festival.</li><li>● <b>Managed</b> more than thousand students from different colleges of India for the event <b>Line Follower-Loop Rush</b></li></ul>   |

### **EXTRA-CURRICULAR ACTIVITIES/ ACHIEVEMENTS:**

|                                       |  |
|---------------------------------------|--|
| <b><u>Scholastic Achievements</u></b> | <ul style="list-style-type: none"><li>● <b>Selected</b> for the <b>Scholarship</b> from the Board of Secondary Education Rajasthan (India) in the year 2010.</li><li>● <b>Scored 86.48%</b> in Matriculation(2007) and <b>85.98%</b> in Intermediate/+2.</li><li>● <b>Awarded the Top Most Category</b> in school five times and got Special mention in <b>Mathematics and Physics</b> in High school.</li></ul> |
| <b><u>Technical</u></b>               | <ul style="list-style-type: none"><li>● <b>Participated</b> in <b>F1 Car</b> making competition held at IIT Bombay.</li><li>● <b>Contributed</b> in the design of the structure of the car and have basic idea of <b>Robotics</b>.</li></ul>   |
| <b><u>Music</u></b>                   | <ul style="list-style-type: none"><li>● <b>Performed</b> in the Mantra (Bands Competition) of Mood Indigo 2010.</li><li>● <b>Performed</b> in Malhar 2010 an annual college festival of St.Xaviers College (Mumbai) and got <b>6<sup>th</sup> Rank</b>.</li><li>● <b>Performed</b> in the Opening Ceremony of the <b>Institute Football League</b>.</li></ul>  |