

Vikalp Jambhulkar
Mechanical Engineering
Indian Institute of Technology, Bombay
Specialization: Computer Aided Design & Automation

07D10015
Dual Degree(B.Tech+M.Tech)
Male
DOB:25/9/1989

Examination	Institute	Year	CPI/%
Graduation	IIT Bombay	2011	6.77
Intermediate/+2	Dr. Ambedkar College, Nagpur	2007	84.5%
Matriculate	Bhonsala Military School, Nagpur	2005	85.7%

INDUSTRIAL EXPERIENCE

Güdel India Pvt. Ltd, Pune - Designing of Single Machine Loader

[May'10 - Jul'10]

- Identified the specific requirements of the market for automatic feeder for a CNC Lathe machine
- Researched various concepts in coordination with mentor and shortlisted the most **cost-effective** and **easy-to-manufacture** design
- Modeled the components in SolidWorks software based on manufacturability, cost and material
- Developments of project are being taken forward by the company to launch a **new product line**

Fiat India Automotive Private Ltd., Pune

[May'09-July'09]

- Surveyed the **Powertrain-Transmission** Department to gain the overall knowledge of its functioning
- Identified the possible reasons for rejections in the transmission assembly line due to noise and leakage by mapping the entire quality control route
- Reduced the rejections significantly by suggesting possible alterations in the assembly line after a quality check in the reworked area

KEY ACADEMIC PROJECTS

Machine for Mat making on Handloom| Dual Degree Project

[June '11-Present]

- Collaborated with **Grameen Shramik Pratishthan** (an NGO) to study the traditional three layer manual process of mat making - a livelihood activity for disabled rural people
- Developed a novel setup to **mechanize** the cutting process and prepared an industrial prototype
- Involved in commercialization of the prototype; **productivity** is expected to rise by **50 - 70%** leading to an over **200% increment** in income

Performance Analysis of a Vertical Shaft Brick Kiln (VSBK)

[May'11-June'11]

- Compiled technical, financial and managerial data from 8 different kilns through telephonic interviews and visits to kilns; visited **Gram Vikas**(an NGO) in Orissa to understand working of kiln
- Analyzed the **energy performance** of the kilns to verify the claims made in literature
- Performed a break even analysis to suggest an **optimum action** plan for a kiln's financial success

Concept for Farming Level of Futuristic City

[Jan'11-April'11]

- Collaborated with a team of 4 as **design specialist** for modeling the floor layout and transportation vehicle through intensive **brain-storming session**
- Incorporated **Failure Mode and Effects Analysis(FMEA)** and **Analytical Hierarchical Process(AHP)** techniques for narrowing to the best concept
- Designed the vehicle on SolidWorks considering the manufacturability, assembly, costing; awarded overall **2nd** position among 13 groups

Lean Manufacturing| Junior Thesis

[Jan'11-April'11]

- Compiled and presented a review of contemporary literature on Lean Manufacturing
- Analyzed different **case studies** for improvements after the incorporation of the **Lean techniques**

Machine Design| Course Projects

- Constructed a device for propelling a car using the potential energy of water
- Identified the opportunity for constructing a **lightweight car** which secured us the **3rd** place
- Fabricated a **miniature version** of printing press to draw equidistant straight lines on a rolling paper using slider-crank mechanism and bevel and crown gears

Cost Effective 3-axis CNC Machine| *Design Project*

[Jan'11-April'11]

- Modeled and fabricated a 3-axis CNC machine utilizing the remnants of a dilapidated lathe machine and a drill machine fully controlled by **joystick** along with **numerical codes**
- Constructed an efficient machine having the **precision of 0.3mm** and cost budget of **Rs.5,000**
- Utilized high torque motors to facilitate the **feedback controlled** motion of the axes
- Executed accurate displacement feedback in all three axes using encoders and potentiometers

Computing Skills

- **Programming Languages:** C , C++,
- **Software Packages:** CollabCAD, SolidWorks, AutoCAD, Ansys, Matlab, R

POSITION OF RESPONSIBILITY

Sports Secretary, Hostel - 6

[2009]

- Managed a budget of **Rs 30,000** to improve sports infrastructure in the hostel
- Introduced food coupons as an **incentive** to increase turnout in hostel sports events
- Restructured the format of the **Viking Footer League**, an intra-hostel football competition; efforts resulted in **60% increase** in participation
- Steered the Hostel team to secure **3rd** position in Inter-Hostel Sophomore General Championship
- Awarded Hostel **Organizational Special Mention** for showing exceptional managerial skills

Coordinator- Marketing, TechFest

[2009]

- Involved in contacting companies for **securing funds** to realize Asia' Largest Technical Festival
- Coordinated the **branding** of 4 companies at prominent locations for maximizing their campus visibility

Battalion Junior Under Officer, Bhonsala Military School

[2004]

- Led **2 platoons** comprising over **200 students**; responsible for their well-being and conduct
- Ensured discipline and **commanded** them for their performance in sports, academics, march-pasts and punctuality
- Mentored the students on a wide variety of matters ranging from academics to personal hygiene throughout the year

EXTRA CURRICULAR ACTIVITIES

Sports

- **Inter IIT Sports:** Represented IIT Bombay Volleyball Team as the main spiker and booster for **4 consecutive** years winning **1 silver & 2 bronze** medals (2007,2008,2009,2010)
- Awarded **Institute Special mention** for all round performance in volleyball
- **Captained** hostel volleyball team winning bronze medal; ending a **6 year** medal drought for hostel
- Mentored upcoming volleyball players to build a strong pool of players for the Inter IIT Team
- Secured a position in top 20 at Inter-Hostel sophomore cross country General Championship
- Represented the hostel in hockey and kho-kho in General Championship
- Awarded Hostel **Sports Color** for outstanding contribution in Hostel sports activities (2009)
- Member of school **Horse Ridding Team**

Technical (*Prison Break Robot, TechFest '08*)

- Designed and fabricated a remote controlled car which overcame the obstructions and tackled the opposition to break out of prison first
- Reached the **Quarterfinals** of the competition;

Cultural

- **Sub Head-** Production, Performing Arts festival (PAF); Jointly led a team of 40 students to design and construct sets for the event with a budget of **Rs 80,000**
- Awarded Hostel **Special Mention** for my contribution in Performing Arts Festival
- Part of the award **winning choreography team** at Performing Arts Festival (2008)