



Lalit Bharatlal Patidar
Mechanical Engineering
Indian Institute of Technology, Bombay
Specialization: Computer Aided Design (CAD) & Automation

10D100025
UG Second Year
Male
DOB: 03/01/1993

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	8.86
Intermediate/+2	CBSE	Advanced Academy Indore	2010	93.20
Matriculation	CBSE	Advanced Academy Indore	2008	94.00

RESEARCH PROJECT:

Internal Combustion Engine Lab, IIT Bombay

Design and Building of a small scale (20 lb) Rocket Engine

[May'11-till date]

Guide: Prof. Arindrajit Chowdhary (Department of Mechanical Engineering)

- Calculated **combustion chamber and nozzle parameters**, cooling jacket and injector specifications
- Simulated combustion and nozzle parameters **using NASA CEA** (Chemical Equilibrium Analysis) code and **RPA (Rocket Propulsion Analysis) software**
- **Modeled various components using SOLIDWORKS**
- Designed test stand for rocket engine thrust measurement

TECHNICAL PROJECT:

IIT B RACING TEAM

[April'11 – till date]

A 60 member cross functional team developing amateur race cars for national and international events organized by SAE (Society of Automotive Engineers)

- Worked on design of a chassis for a single seat all terrain race vehicle; extensively used CAD tools including SOLIDWORKS for the same
- Conducted design validation of the chassis for various crash conditions using CAE tools including ANSYS
- Developed test set ups and conducted experimental verification of chassis for parameters such as torsional rigidity, vibration modes etc.

Voting Machine (Course Project for CS 101)

- Developed a **C++ program** which can be used **for conducting elections** (A Basic and simplified version)
- Created a **library for the program** and used FLTK graphics to display results using bar graphs

SCHOLASTIC ACHIEVEMENTS:

- Awarded **certificate of merit** for being in **top 0.1% students in Mathematics** (100 out of 100) in All India Senior Secondary Certificate Exam (AISSCE 2010) by CBSE
- Ranked among top 200 students in **National Cyber Olympiad 2008**
- Ranked **among top 250 students in ISAT 2010** conducted by Indian Institute of Space Science and Technology among 1,00,000 students all over the nation
- Secured AIR 2410 in IIT-Joint Entrance Exam- 2010 among 4,50,000 students all over the nation

- Secured AIR 4083 and **State Rank of 293 in AIEEE-2010** (All India Engineering Entrance Exam) among 10,00,000 students
- **Scholarship holder for Academic Excellence**, Advanced Academy School Indore for **3 consecutive years** (2008-2010)

TECHNICAL SKILLS:

- **Modeling and Analysis:** SOLIDWORKS, ANSYS, NASA CEA, RPA (Rocket Propulsion Analysis), MATLAB
- **Languages:** C/C++, Visual Basic; **Operating Systems:** Windows, Linux

COURSES UNDERTAKEN:

Mechanical Engineering

Engineering Drawing, Engineering Mechanics, Solid Mechanics, Thermodynamics, Workshop and Manufacturing Practices Lab, Fluid mechanics, Strength of Materials, Manufacturing processes, Solid mechanics Lab

Other Department

Calculus, Linear Algebra, Ordinary Differential Equation, Numerical analysis, Data Analysis and Interpretation, Electrical and electronic circuits, Engineering Metallurgy, Modern Physics, Economics, Computer programming and utilization, Chemistry, Physics Lab and Chemistry Lab

Additional Courses towards obtaining a minor in Aerospace Department

Introduction to Aerospace Engineering, Aerospace Propulsion

EXTRA-CURRICULAR ACHIEVEMENTS AND INTERESTS:

Social Activities

- Awarded **certificate of appreciation by Dean of Students Affairs IIT Bombay** for significant work in NSS (National Service Scheme) during first year
- Active member of GRA (Group for Rural Activities)
- Participated in various **socio-economic talks** and rural surveys conducted by GRA

Cultural

- Performed in P.A.F. (Performing Arts Festival) 2010

Technical Activities

- Successfully built a manually controlled robot for “Trackmania” competition organized by Technic Club IIT Bombay
- Designed and built an autonomous robot for “Line Follower” competition organized by the Technic club, IIT Bombay and stood among top 10 teams

Other Interests

- Participated in week long **Design Exploration Workshop (DEW)** conducted by Prof. Amarnath Department of Mechanical Engineering, IIT Bombay
- Participated in **Entrepreneurship workshop** organized by School of Management IIT Bombay
- **Trekking enthusiast**, completed several treks in Sahyadri region