



Deepak Miglani
Mechanical Engineering
Indian Institute of Technology Bombay
Specialization: Computer Integrated Manufacturing

12D100019
UG Second Year
Male
DOB: 08 April 1995

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2014	8.38
Intermediate/+2	CBSE	St. Vivekanand Hr. Sec. School	2012	91.60
Matriculation	CBSE	R.S.V.	2010	9.60

ACADEMIC ACHIEVEMENTS

- Secured **AIR 664** in IIT-JEE 2012 amongst 5.07 lakh aspirants
- Pursuing **Minor** in Electrical Engineering
- Secured Gen. Rank 402 in ISAT 2012 amongst more than 85,000 aspirants
- *District Representative* in Division level Science Quiz Competition 2010

POSITIONS OF RESPONSIBILITY

- **Junior Design Engineer, IITB Racing Club** [August, 2013 – till date]
 - Currently working on the **electrical-differential** of the *electric race vehicle* for the **Formula Student UK-2014 competition**
 - Involved in designing and analyzing circuits for motor driver, analyzing working of various motors
 - Made the **Simulink Model** on **MATLAB** for the **vehicle dynamic analysis**
- **Creatives Coordinator, Techfest (Asia's largest Science & Technology Festival)** [July, 2013 – Jan,2014]
 - Designed publicity posters using *Adobe Photoshop*

KEY PROJECTS

- **Nonlinear Dynamical Systems and Control | Guide : Prof. P S. Gandhi** [Dec,2013-Jan, 2014]
 - Controlled **DC motor with encoder** and applied **closed loop feedback system** to control the desired position using microcontroller **Piccolo Control Stick f28069**
 - Used **Code Composer Studio** to code the microcontroller
 - Used **Enhanced Quadrature Encoder Pulse Module** and **timer interrupt** to control the motor
- **Hand Gesture Robotic Arm** [May-June,2013]
Project under Institute Technical Summer Projects, 2013
 - Made the *human-like robotic arm controlled by a hand glove*
 - Recognized in **top 5 projects** amongst over hundred summer projects
 - The gesture of our arm is sensed using linear sliding potentiometers and accelerometer and the robotic arm replicates the action of our arm using servo motors and Arduino
- **Line Follower Bot** [September, 2012]
The bot follows a white line on black surface autonomously by taking required turns judged by IR sensors and Arduino Duemilanove and senses an object at a distance using proximity sensors
 - Secured 7th rank among 120 bots in Line Follower Competition conducted by Electronics Club
- **Wireless Remote Controlled Bot** [August,2012]
Remote Controlled car with differential mechanism
 - Awarded **best designed bot** title in the XLR8 competition for an *innovative control mechanism*
 - Amongst top 10 bots out of over 170 bots conducted by Robotics Club of STAB, IIT Bombay
- **COURSE PROJECTS-**
 - **Smart Room | Guide : Prof. Dipankar Saha** [Nov, 2013]
 - Made the **Simulink Model** and presentation for optimizing the use of electricity

- **4-in-a-row** | Guide: Prof. Shridhar Iyer [March-April, 2013]
Game developed using language C++
 - Involved **Artificial Intelligence** in single player mode
- **Street Fighter** | Guide: Prof. Shridhar Iyer [February - March, 2013]
Game developed using Scratch
 - Interactive 2 player game developed using vector graphics

ONGOING PROJECT

- **Autonomous Football Playing Humanoid** [July, 2013 - till date]
 - Pursuing a target to design a humanoid with artificial intelligence to play soccer and represent IIT Bombay at **Annual International ROBOCUP**
 - Learning **processing** to create a interactive window for controlling multiple servos
 - Working on pressure sensors, accelerometer, gyroscope and servo driver
 - Designed **Solidwork model** of the humanoid

SOFTWARE SKILLS

Mechanical Software

- Simulink & Simscape, LabView : Making Simulation Models
- MATLAB
- Solidworks, AutoCAD : 3D CAD Modeling

Electronics Software

- Code Composer Studio, Code Warrior Development Studio
- Eagle : Circuit Designing
- Processing

Coding Software

- C++,Scratch : Programming Languages
- OpenCV library in C++ : Image Processing

COURSES UNDERTAKEN

Core Courses- Engineering Mechanics, Solid Mechanics, Engineering Graphics and Drawing, Thermodynamics

Elec. Courses- Digital Electronics, Introduction to Electronic Circuit, Control and Communications,
Experimental and Measurement Laboratory

Other Courses- Data Analysis and Interpretation, Economics

EXTRA CURRICULAR ACTIVITIES

- Social Service - Member of Green Campus family of *National Service Scheme* in first academic year
- Fascinated towards stocks and actively participated in *Virtual Stock Market* contest