Vivek Kumar
Electrical Engineering
Indian Institute of Technology, Bombay
Specialization: None

100070022
UG Third Year (B.Tech.)
Male
DOB: 12-02-1993

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	8.54
Intermediate/+2	CBSE	Sardar Patel Public School,Bokaro	2010	85.00
Matriculation	CBSE	Jawahar Navodaya Vidyalaya,Giridih	2008	89.60

Academic Achievements

- Was selected for **Indian National Physics Olympiad(INPhO) 2010** organised by HBCSE
- Was selected for **Indian National Chemistry Olympiad(INChO) 2010** organised by HBCSE
- Was selected for **Indian National Astronomy Olympiad-Senior(INAO-Sr) 2009** organised by HBCSE
- **All India Rank 954 in IIT-JEE 2010** among 455,000 aspirants
- Got **Certificate Of Merit in Mathematics** for being among top **0.1%** in All India Secondary School Examination 2008 (CBSE CLASS XIth)
- Selected in **Jawahar Navodaya Vidyalaya (JNV)** in 2003. A organisation to provide good quality modern education to the talented children predominantly from rural area
- **Got Prabhat Khabar Partibha Samman and a shield as honour** for cracking IIT-JEE

Intern And Projects

- **SORS(Seat Occupancy Reporting System)**   *(Summer Intern 2012)*

  Designed a device (**Patent is filed for this device)** to send all details of buses (Like seat occupancy details, speed, longitude , latitude etc) to a **Server** using **Atmega640, GPS, GSM, Load Sensor** and many more devices. And got an appreciation to be published about this project in TOI and others Newspapers. See the link: http://timesofindia.indiatimes.com/city/mumbai/5-IIT-B-students-design-five-wonder-products/articleshow/15066466.cms

- **Smart Helmet**   *(Summer Intern 2012)*

  Designed a device(**Patent is filed for this device)** using **Atmega32, Sensor, RF, LCD, and Relay** to ensure that bike will start only after wearing the helmet. Bike will stop in 1 minute after opening the helmet while driving. All current status is shown in LCD.

- **Intelligent Brick Game** (device lab project under Prof MB Patil & J. John)   *(Spring semester 2012)*

  Made a device upto **3 Levels** for brickgame(Just like PongGame) using Deo-Nano Board (**FPGA and G-Sensor**) and **128X64 LCD** with **Verilog Coding**. Level-1, 2 and 3 have respectively 1 ball, 2 balls and 1 ball and 1 stone with one paddle in each level.

- **Pocket Tank Game**   (*Autumn semester 2010*)

  Computer Programming and Utilization course project under Prof. D.B. Phatak. Implemented a **pocket tank game** using C++ as a part of 13-membered team and developed a GUI for it using EzWindows API for C++.

- **Child Locator** (under Prof Girish Kumar,IIT Bombay)

  Designing a device which will sound the buzzer if child(small) will go far from his parents (wireless Communication) using CC1101 transceiver , atmega 8, buzzer and other devices.

- **Karnaugh Map**   *(Autumn 2010)*

  Implemented the **QM** algorithm for Karnaugh Map using C++ for 60 inputs under the Prof. Vijyakumaran and Prof. S. Patkar

- **F1 Car**   *(Autumn 2010)*

  Made a Remote controlled Car using RF circuits, 4 motors, L293D, and 7805 in a team of 4.

- **Op-Amp** (EE 230 Lab Project)   *(Spring semester 2012)*
    Desiged the circuit for Op-amp in the breadboard using the bipolar junction transistors.
- **Device Opening**   *(Spring semester 2011)*
    Introduction to Electronics course project under Prof. J. M. Vasi**.** Studied the interiors of **Optical Mouse** and the functionality of different components of it

Courses Undertaken (By April 2013)

- **Departmental-** Introduction to Electrical Systems, Introduction to Electronics, Network Theory, Electronic Devices and Circuits, Signals and Systems, Analog Circuits, Digital Systems, Electrical Machines and Power Electronics, Communication System, Electromagnetic Waves, VLSI Cad, Probability and Random Process, Microprocessor, Control Systems, Digital Signal Processing, Digital Communications, Power Systems
- **Maths**- Calculus, Linear Algebra, Ordinary and Partial Differential Equations, Complex Analysis, Introduction to Probability
- **Other Courses**- Computer Programming and Utilization, Data Analysis and Interpretation, Electricity and Magnetism, Chemistry, Economics, **Advance Computing** for Electrical Engineering (**Honour Course**), Psychology
- **Departmental Lab Courses**- Electronic Devices Lab, Analog Circuits Lab, Digital Circuits Lab, Machines Lab, Microprocessor Lab, Communication Lab, Control Systems Lab
- **Other Lab Courses-** Measurements Lab, Physics Lab, Chemistry Lab, Engineering Graphics and Drawing, Workshop Practice

Position Of Responsibility

- Worked as a **Coordinator** in Techfest 2012(Asia's Largest Technology and Science Festival) in Exhibition Department
- Worked as **Organiser** in Mood Indigo 2010. Actively Participated in Organising Pant-Ball Game and lead it to a huge success
- Worked as **Organiser** in Techfest 2011. Contributed my valuable work in organizing **Avalanche Competition** (Its a Robotics Competition).

Computer Skills

- Programming language and web**: C, C++ , Java**, **HTML, CSS, PHP**
- HDL**: Verilog**
- **Assembly Language** for 8085,8051, C coding for **AVR, Arduino and 8051 family** of microcontrollers.
- NgSpice, LTspice, Labview , Matlab

Extra-Curricular

- Selected in **NSO Athletics**
- Participated in Intra-Hostel Freshie GC in **100m and 200m Race**
- Participated in **cross-country race for freshman and sophomore**
- Active member of **Scout Guide** in my school from class 7th to 10th.
- Participated in making Line Follower Robot using **Arduino , IR Sensor,** and other device**.**

Workshop

- **Did IPR (Intellectual Property Rights)** workshop taken by leading specialists and practitioners of the same (lawyers, Industrial IP managers)
- Successfully completed the workshop of **Swarm Robotics**