**MAYANK MEGHWANSHI**          110050012

**Computer Science & Engineering**          **UG Third Year (B.Tech.)**

**Indian Institute of Technology Bombay**          **Male**

**DOB: July 12, 1993**

| Examination | University | Institute | Year | CPI / % |
|---|---|---|---|---|
| Graduation | IIT Bombay | IIT Bombay | 2014 | 8.43 |
| Intermediate/+2 | CBSE | Samrat Public School, Ajmer | 2011 | 90.80 |
| Matriculation | CBSE | St. Stephen's Sr. Sec. School, Ajmer | 2009 | 87.40 |

## SCHOLASTIC ACHIEVEMENTS

- Secured an **All India Rank 1777** in IIT-JEE given by about **0.5 Million** aspirants.
- Secured an **All India Rank 2026** in AIEEE given by about **1.1 Million** aspirants.
- Secured **State Rank 187** in RPET 2011 given by about **70,000** aspirants

## INTERN AND PROJECTS

INTERN

May'13 - Jul'13

**Summer Intern at Works Applications, Tokyo**

Advanced Technical Engineering(ATE) Team

I worked on a web application project Works Academy Console (WAC). Added some features on client side of WAC using **Functional Reactive Programming**(FRP) library **Bacon.js**. I also did server side work in **Java**.

PROJECT

CS 210

Mar'13 - Apr'13

**Ping Pong Game on FPGA Board**

Logic Design Course Project - Prof. Ashwin Gumaste

In team of 5 wrote a **VHDL** program on Xilinx ISE Software and synthesized on Atlys Spartan 6 **FPGA** Development Board to simulate a 2 player ping pong game. The output of the game is shown on **HDMI screen** connected to FPGA board.

PROJECT

CS 213

Oct'12 - Nov'12

**Image to PDF Converter**

Data Structure Course Project - Prof. Varsha Apte

In team of 2 made an **Optical Character Recognizer** in C++ to extract text from image files and save it as PDF. Used different **image processing** algorithms to extract characters from image and used template matching to detect characters. Also made a **GUI using QT** library to see steps of conversion of image to text.

PROJECT

May'12 - Jun'12

**Android Game Controller**

Institute Technical Summer Project

Made an **Android Mobile Application** for controlling mouse motion, keyboard direction keys and some other predefined keys using **gravity sensors and accelerometer** in android phone. Used **TCP socket connection** over Wi-Fi to send data from phone to PC. Made PC interface in **JAVA** programming language.

PROJECT

CS 152

Mar'12 - Apr'12

**9 Ball Pool**

Programming Paradigm Course Project - Prof. Amitabh Sanyal

In team of 3 made a computer billiards game using **PLT-Scheme** programming language in Dr. Racket(Functional Programming). Used World feature in Dr. Racket for implementation of graphics in the game. Also implemented **AI using mini-max** algorithm for choosing of shot to be played by computer player

PROJECT

CS 296

Mar'13 - Apr'13

**Rube Goldberg Machine Simulation**

Software Systems Lab Project - Prof. Parag Chaudhuri

In team of 2 designed and simulated a Rube Goldberg Machine using **Box-2D physics engine** based on OpenGl.

## Computer Skills

| | |
|---|---|
| Languages | C++, JAVA, PLT Scheme, Python, SWI Prolog (Basics), Scilab, Bash, Assembly(MIPS) |
| Web Development | HTML, CSS, PHP, SQL, JavaScript, Python-Django |
| Version Control | GIT, SVN |
| Databases | PostgreSQL, MySQL |
| Softwares | Eclipse IDE, Adobe Photoshop, Xilinx ISE, Doxygen, GNU Plot, Perf, LaTeX |

## Position of Responsibility

- **Coordinator** - Web and Coding Club Apr'12-Apr'13
  - Coordinator of one of the largest student clubs with over 1200 members. Organized various sessions, competitions and workshops on different programming topics and promoted open source activities in institute.

- **Organizer** E-Summit 2012, Tech-Fest 2012 and Mood Indigo 2011.

## Extracurricular Activities

- **Programming**
  - I also write programming related **blog** on new things I learn. For eg. Bacon.js, FRP.
  - Participated in **Yahoo HackU 2013** and made an application 'WePlYS' using **Django and JavaScript** to play your PC music in chrome with lyrics and online statistics.
  - Won second prize in **WnCC Hack Night** for Facebook Synchronisation application(fbSync), which syncs facebook photos to a folder on your PC and vice-versa.
  - Participated in **Yahoo HackU 2012** and made a web application '**Humane**' for connecting NGOs to donors.
  - Contributed in **Institute Calendar** made during **Hack for Insti** organized by Web and Coding Club of IIT Bombay.

- **Technical**
  - Designed and fabricated a **line following car** for line follower competition organized by Electronics Club of IIT Bombay. Coded the logic for the car on **Arduino** Board.
  - Designed and fabricated a **remote controlled F1 car** for the 'Techone' event organized by the Electronics Club of IIT Bombay.

- **Other**
  - Taught English, Maths and Science at Powai English High school to weak students under **Education Outreach Program** of NSS IIT Bombay.
  - Taught basics of using computer at Computer Center under **Computer Literacy Program** of NSS IIT Bombay.

## Courses Undertaken

- **Computer Science Related**:
  Abstractions and Paradigms for Programming, Data Structures, Discrete Structures, Software Systems, Algorithms, Automata Theory, Logic Design, Programming Derivation, Database*, Networks*, Graphics*, Computer Architecture*.

- **Other**:
  Calculus, Data Analysis and Interpretation, Linear Algebra, Differential Equations, Basic Algebra, Numerical Analysis, Economics, Introduction to Design*, Philosophy*.