

## Mihir Kulkarni Computer Science & Engineering Indian Institute of Technology Bombay

12D020007 UG Second Year Male

DOB: 28/1/1994

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2014	9.88
Intermediate/+2	HSC (Maharashtra Board)	SVPT's Saraswati Rabodi School, Thane	2012	91.00
Matriculation	ICSE	Smt. Sulochanadevi Singhania	2010	94.80

## **Major Academic Achievements**

•	Department	Rank 5	in a	batch	of 97	students
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- Awarded **AP grade** for exceptional performance in *Calculus, Economics, Data Analysis and Interpretation* and *Introduction to Chemical Engineering* (2012-13)
- Awarded **Institute Academic Prize** by IIT Bombay (2012-13)
- Ranked **1192**<sup>nd</sup> in the IIT JEE out of 5 lakh students (2012)
- Ranked **494**th in the AIEEE out of a million students (2012)
- Awarded the **KVPY** scholarship by the Dept. of Science and Technology, India (2012)
- One of **6** students from Std XII to clear the Maharashtra Regional Mathematics Olympiad (2012)
- Among the **top 1%** among 43,000 candidates in the **National Physics Olympiad** (2012)
- Ranked **16**th in the state for the **Maharashtra Talent Search** (MTS) scholarship exam (2008)
- Awarded Gold Medal (for finishing in the state top 50) and then Silver Medal in the Ganit
   Pradnya exam conducted by the Mathematics Teacher's Association of Maharashtra (2005,2008)
- Awarded **Silver Medal** for reaching the final level of the prestigious **Homi Bhabha** exam (2009)
- Ranked **261**st in the nation and **1**st in the city for the National Cyber Olympiad, conducted by the Science Olympiad Foundation (SOF) (2010)
- Ranked **92**<sup>nd</sup> in the International Mathematics Olympiad, conducted by the SOF (2009)
- Pursuing a minor in Mathematics

# **Projects**

• Vaakya (Summer '13)

Query processing system | Institute Technical Summer Project (ITSP) | Python, PHP

- Created, in a team of 4, a first of its kind website providing comprehensive information about IITB's academic affairs all at one location
- Wrote Python programs for crawling through IIT Bombay's internal network (including all department webpages) for contact details, professors' research interests and courses taken
- **Linked information** including course *feedback, grading statistics,* course *content* and *courses teaching a particular topic,* along with *charts*
- Used HTML and CSS with a PHP back end to provide an intuitive interface
- Awarded best Web And Coding Project by STAB (student technical body) under ITSP '13

• Zeno (Spring '13)

Role Playing Game (RPG) | C++
Guide: Prof Sridhar Iyer, IIT Bombay

- Developed an RPG with a detailed storyline and battle mechanics inspired by classic RPGs
- Created a maze using a ternary tree
- Implemented parameters such as *health*, *attack*, *defence*, *speed* in a complete battle system and features such as *power ups*, *boss battles*, *levels* etc.

• Air Hockey (Spring '13)

One Player Game | Scratch

Guide: Prof Sridhar Iyer, IIT Bombay

Simple mouse controlled one player Air Hockey game, with multiple levels and difficulty settings

• Implemented a basic **Artificial Intelligence** for the user to play against, which involved moving the opponent towards the y coordinate of the puck along a vertical line

### **Technical Skills**

• *Programming languages* C++, Java, Python, Scratch, Ngspice

Web Development HTML, CSS, PHP
 Operating systems Windows, LINUX

## **Key Courses Undertaken**

#### **Computer Science**

Computer Programming and Utilization, Discrete Structures\*, Data Structures and Algorithms (and Lab)\*, Abstractions and Paradigms in programming (and lab) \*\*, Automata Theory and Logic\*\*, Design and Analysis of Algorithms\*\*, Logic Design (and lab) \*\*, Software Systems Lab\*\*

#### **Mathematics, Statistics and Others**

Calculus, Data Analysis and Interpretation, Economics, Linear Algebra, Differential Equations, Real Analysis(Minor)\*, Numerical Analysis\*\*

\* To be completed by December 2013

\*\* To be completed by May 2014

# **Positions of Responsibility**

• Convener of the Literary Arts Club, IIT Bombay,

(2013-14)

(2012)

- Ran a summer quiz blog which got 15,000 hits in two months
- Set institute wide Potpourris and a Food & Beverages quiz; involved in conducting all club events
- Math teacher at <a href="www.virtualvidyalay.org">www.virtualvidyalay.org</a> (2013-present)
  Venture aiming to provide quality video lectures for Std 11/12 students (under construction)
- **Organiser**, **Coordinator** for Mood Indigo (Competitions), Asia's largest college fest (2012,2013) Helped to organize and set Mood Indigo's competitions along with Nihilanth, the IIT-IIM quiz fest
- **Organiser** for TechFest (Lecture series), Asia's largest science and technology festival (2013) Helped organize lectures given by eminent people such as Ashoke Sen, Stephen Cook, Shahn Majid

### Extra Curricular

- **Semifinalist** at **TerraQuiz**, an international environment quiz organized by TERI and MoEF (Ministry of Environment and Forests), India (2010)
- Finished **1**<sup>st</sup> in the IIT Bombay **Sci-Tech** quiz
- Finished 1st in **Open Potpourri** and 2nd in **Creative Writing** in Freshiezza (freshman event) (2012)
- Ranked **4**th in **Math Olympics**, a math and logic competition for IITB freshmen (2012)
- Active contributor for several articles of InsIghT, the IITB media body; article leader for one (2013)
- Interests include abstract mathematics, teaching, quizzing, reading, writing, music