Rohan Prinja | **110050011**
Computer Science & Engineering | **UG Second Year**
Indian Institute of Technology, Bombay | **Male**
Specialization: N/A | **DOB: 18/01/1994**

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2013	8.98
Intermediate/+2	Maharashtra Board	P Jog Jr. College	2011	92.33
Matriculation	CBSE	Delhi Public School, Pune	2009	95.40

Academic Background

- **All India Rank 53** in IIT-JEE 2011 among roughly 5 lakh candidates
- **All India Rank 51** in AIEEE 2011 among more than a million candidates
- **All India Rank 7** in VITEEE 2011 (for admissions to **Vellore Institute of Technology**)
- **All India Rank 130** in the 2011 entrance exam for the **Indian Insitute of Space Technology**
- Qualified for the **Indian National Physics Olympiad, 2010**
- Qualified for the **Indian National Mathematics Olympiad, 2011** (secured **rank 64** in the Regional Mathematics Olympiad)
- **All India Rank 1** in the 7^{th} **National Cyber Olympiad (NCO-2008)** conducted by Science Olympiad Foundation, New Delhi

Work Experience

Web and Coding Club, IIT Bombay, January 2013
Conducted a **Python programming workshop** for beginners

Projects

– **SSH Key Management** [**ongoing**] **Internship** *Summer 2013*
- Developing a CLI app for privileged users to efficiently provision, rotate and revoke SSH key permissions to employees at the company

– **RTalk** **Internship** *Summer 2013*
- Built an anonymous web-based group chat application in **Ruby on Rails**
- Users create a chat room and invite their friends by sharing the randomized room URL. Anyone can leave the room anytime. When everyone leaves the room, it is removed and the chat logs are destroyed.
- Support for emoticons, clickable links and the ability to export chat history as a text file

– **Fast Fourier Transform on FPGA** **Guide:** Prof. Ashwin Gumasthe *Spring 2013*
- Implemened eight-point radix-2 DIF (Decimation in Frequency) Fast Fourier Transform on Atlys Spartan 6 FPGA using **VHDL**.
- User gives input via DIP switches on the Spartan board. Output is displayed using the board LEDs.

– **Rube Goldberg Machine Simulator** **Guide:** Prof. Parag Chaudhari *Spring 2013*
- Coded a simulation of a Rube Goldberg Machine in **C++** using the Box2D physics engine and the OpenGL library for rendering

– **Image Morphing** **Guide:** Prof. Parag Chaudhari *Spring 2013*
- Coded the **Beier-Neely Algorithm** for morphing one image into another and built a GUI around the morpher using **Java** and **Swing**

– **Conway's Game of Life on the Terminal** [self-interest] *Winter 2012*
- Coded a terminal program to simulate the classic version of Conway's Game of Life in **Python** using the **ncurses** library

– **FMoT: File Manager on Terminal** **Guide:** Prof. Varsha Apte *Fall 2012*
- Wrote a **terminal-based file manager** in **C++** for *nix systems capable of performing standard file management tasks including *cutting, copying, pasting, searching for files*
- Code predominantly used the **ncurses** library for interfacing with the terminal

– **Chinese Checkers** **Guide:** Prof. Amitabha Sanyal *Spring 2012*

• Implemented **heuristic computer game algorithms** (*Minimax and Alpha-beta pruning*) and created a GUI allowing upto 6 players (with 1-2 computer players) to play at once
• Project code written in **Racket** (a functional programming language)

– **Statistical Analysis of Census Data** **Guide:** Prof. Milind Sohoni *Spring 2012*
• Analysed census data using **Scilab** from two *talukas* of Maharashtra regarding literacy levels, sex ratios and education levels, and used statistical techniques like regression analysis to infer trends in the *talukas*

– **Monopoly Game** **Guide:** Prof. Deepak B. Phatak *Fall 2011*
• Programmed the board game **Monopoly** in **C++** with the **EzWindow** graphics library
• Created *supporting documentation*, weekly project reports, SRS, etc. for exposure to *formal (team) programming* practices

Programming/Technical Skills

• **Knowledgeable in** C, C++, Racket (Scheme), Python, Ruby, Rails, AWS (S3, IAM), VHDL, bash
• **Basic familiarity with** HTML/CSS/JS, J, SWI-Prolog, R, Matlab, Octave, Scilab, Haskell

Skills and Interests

• Passionate about foreign languages, computer science and music
• Fluent in **French** (studied as a **second language** for **7 years** at the school level)
• Working knowledge of **German** (**one-year course**) and **Chinese** (attended **one-year course** at IITB from 2011-2012, certified by Beijing Jiaotong University)

Areas of Interest

• **Computer Science:** Algorithms, Graph Theory, Quantum Computation
• **Mathematics:** Linear Algebra, Number Theory, Combinatorics
• **Humanities (excluding Economics):** Linguistics, Psychology
• **Economics** Economics, Game Theory

Key Courses Undertaken

Core: Automata Theory and Logic, Logic Design (with separate lab course), Design and Analysis of Algorithms, Program Derivation (honours course), Software Systems Lab, Data Structures and Algorithms (with separate lab course), Discrete Structures, Abstractions & Paradigms for Programming (with separate lab course), Computer Programming & Utilization
Mathematics: Signals and Feedback Systems (**minor course**), Mathematical Structures for Systems and Control (**minor course**), Data Analysis & Interpretation
Other: Modern Physics, Chemistry, Calculus, Linear Algebra, Differential Equations

Extra-curricular Activities

• Interested in art, specifically, **Pixel Art**
• Created a **wall-following robot** (self-controlled) in a team of 3 for the Wall-E competition in **Techfest 2012**, which was selected among the top-32 teams, as well as a **racing robot** (remote-controlled) in a team of 3 for **Trackmania 2012**, which navigated an obstacle course
• Completed one year of **National Service Scheme** (2011-2012). Performed **shramdaan** in rural areas of Maharashtra, visited NGOs and assisted in the building of a **tubewell**
• Attended talks on **application development** conducted in 2012 by the *Google Developer Group* (GDG) to encourage and popularize writing apps for the *Android platform*
• **Debating:** participated in and reached the finals of Sardar Patel Institute of Technology, Mumbais debate competition in SPACE (annual cultural festival)