# Ranveer Aggarwal

# Second Year Undergraduate Department of Computer Science and Engineering Indian Institute of Technology, Bombay

**EDUCATION** 

• B.Tech. (Hons.) Computer Science and Engineering Indian Institute of Technology Bombay

• Intermediate/+2

Aggregate: 92.80%

Lady Anusuya Singhania Educational Academy (CBSE) [2012]

CGPA: 9.60

CGPA: 7.03

• Matriculation Hem Sheela Model School (CBSE) [2010]

Key ACADEMIC PROJECTS

Chess Titans

Guide: Prof. Amitabha Sanval

Spring 2013

- One player chess game in PLT Scheme using in-built GUI Toolkit in DrRacket
- AI makes use of the Minimax Algorithm with Alpha-Beta Pruning
- Heuristics to decide the best move for the computer, at any stage of the game

E-Ball Guide: Prof. Abhiram Ranade Autumn 2012

- Classic brick breaker game in C++ using Particle Physics
- Randomly generating levels with varying difficulty and ball speeds
- User Interface designed using the simplecpp package

PROFESSIONAL Product Development Intern

Winter 2013

EXPERIENCE

Tushky Events and Entertainment

Designed a Ranking Algorithm for events and their sellers based on social and analytic data and implemented it on real data.

- Achievements Winner at Microsoft Appathon, code.fun.do held at IIT Bombay in Spring 2014
  - Selected in the first round of Microsoft Hackcon 2014, ranking 8<sup>th</sup> overall
  - Podium positions in all freshmen robotics competitions:
    - 1<sup>st</sup> in autonomous line follower making competition,
    - $-3^{rd}$  in RC car designing competition and
    - 2<sup>nd</sup> in RC football-playing bot making competition

OTHER

Kapi

Spring 2014

Projects AND HACKS Microsoft code.fun.do

- A note-making app that, along with normal text, typesets maths in LATEX format without having to write complicated code, rendered using MathJAX library
- Also lets the user draw diagrams and graphs on a canvas (rendered through HTML)

Rumor Roll! Autumn 2013

Yahoo! HackU

• A website that displays links, tweets and videos related to rumors about the query

• Developed using a mashup of Yahoo! Boss API, Twitter API v2.0 and YouTube API

## Android Desktop Controller

**Summer 2013** 

Institute Technical Summer Project (ITSP)

- An Android application that uses Bluetooth to control PC through an Android mobile
- Used Java's **Robot** class to assign PC's features to commands passed by device as strings

**Hostel Website** 

A site for all the hostelites to stay updated on the current events in the hostel, and also a common request/complaint portal, developed using Twitter Bootstrap v3.0

# SCHOLASTIC ACHIEVEMENTS

- All India Rank 104 (State Rank 2) among 3.75 lakh participants in National Level Science Talent Search Examination (NSTSE) 2012 conducted by Unified Council
- Secured All India Rank 1 in International Olympiad of Science (IOS) 2009
- All India Rank 53 (State Rank 1) in National Science Olympiad (NSO) 2008 conducted by Eduheal Foundation amongst nearly 4 lakh participants
- Pursuing Minors at Industrial Design Centre, IIT Bombay
- Amongst top 0.005% in AIEEE 2012, an exam taken by over a million students

PROGRAMMING • Languages: C++, Java, MIT-Scheme, Python, Rebol, Prolog, LATEX  $2\varepsilon$ 

SKILLS

- Web Development: HTML5, CSS3, PHP, JavaScript
- Engineering Softwares: MATLAB, SCILAB, LabView
- Environments: Windows, Linux

FIELDS OF Interest

- Software Engineering
- Algorithm Design and Analysis
- Cryptography
- Machine Learning and AI

Positions of Convener, Web and Coding Club, IIT Bombay

April 2013 - Present

RESPONSIBILITY Convener of one of the largest clubs of IIT Bombay which supports coding and related activities in the institute, promoting coding culture across students of all departments. Responsible for organising Hackathons, talks and many other coding related events.

# Web Secretary, Hostel 3, IIT Bombay

April 2013 – Present

Elected as Hostel Web Secretary for Hostel 3. Responsibilities include:

- Conducting intra-hostel web development workshops and competitions.
- Design and maintenance of the hostel website and ensuring that everything done by the hostel council is transparent and publicised through a common web portal

Coordinator, TechFest 2014

May 2013 - January 2014

Introduced animation effects on the website for TechFest 2014 using jQuery plugins and coordinated a workshop on Swarm Robotics.

# Extra Co-Curricular ACTIVITIES

- Worked as a market analyst at Startup Today (a crowdfunding startup)
- Participated in several speaking events, including MUNs, debates and extempores
- Written many blogs, including Web Development blogs for Web and Coding Club
- Active user on Sphere Online Judge (SPOJ), HackerRank and Stack Overflow
- Completed the year-long course by National Sports Organization (NSO) in Squash
- Enthusiastic in swimming and water adventure sports like Scuba
- Worked as an organiser in Mood Indigo 2012, TechFest 2013 and E-Summit 2013

# KEY COURSES Core:

### Undertaken

Data Structures, Abstractions and Paradigms in Programming, Software Systems\*, Design and Analysis of Algorithms\*, Logic Design\*, Computer Programming and Utilization, Discrete Mathematics, Introduction to Machone Learning

#### Other:

Calculus, Linear Algebra, Differential Equations, Numerical Analysis\*, Modern Physics, Environmental Studies, Economics, Basics of Electronics and Electrical Engineering, Chemistry, Basics of Visual Communications, Data Analysis and Interpretation, Sound and Music Design

### Online Courses:

Algorithms: Part I and Part II (Prof. Robert Sedgewick and Prof. Kevin Wayne), Learn to Program: The Fundamentals (Prof. Jennifer Campbell and Prof. Paul Gries), Machine Learning (Prof. Andrew Ng)

Note: The \* marked courses will be completed by April 2014.