

**Ranveer Aggarwal**  
**Department of Computer Science and Engineering**  
**Indian Institute of Technology, Bombay**

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| EDUCATION                     | <ul style="list-style-type: none"><li>• B.Tech. (Hons.) Computer Science and Engineering<br/>Indian Institute of Technology Bombay</li><li>• Intermediate/+2<br/>Lady Anusuya Singhanian Educational Academy (CBSE) [2012]</li><li>• Matriculation<br/>Hem Sheela Model School (CBSE) [2010]</li></ul>  | CGPA: 7.11<br><br>Aggregate: 92.80%<br><br>CGPA: 9.60 |
| KEY<br>ACADEMIC<br>PROJECTS   | <p><b>Orrery Simulation</b>      <i>Guide: Prof. Parag Chaudhary</i>      <b>Spring 2014</b></p> <ul style="list-style-type: none"><li>• A mechanical simulation of the solar system using gears instead of gravity</li><li>• Used <b>Box2D</b> Physics Simulation engine, GLUT and GLUI to get a graphical output</li><li>• Programmed in C++ and profiled and optimised using Unix tools like GProf</li></ul> <p><b>Chess Titans</b>      <i>Guide: Prof. Amitabha Sanyal</i>      <b>Spring 2013</b></p> <ul style="list-style-type: none"><li>• One player chess game in PLT Scheme using in-built GUI Toolkit in DrRacket</li><li>• AI makes use of the <b>Minimax Algorithm</b> with <b>Alpha-Beta Pruning</b></li><li>• Heuristics to decide the best move for the computer, at any stage of the game</li></ul> <p><b>E-Ball</b>      <i>Guide : Prof. Abhiram Ranade</i>      <b>Autumn 2012</b></p> <ul style="list-style-type: none"><li>• Classic brick breaker game in C++ using <b>Particle Physics</b></li><li>• Randomly generating levels with varying difficulty and ball speeds</li><li>• <b>User Interface</b> designed using the <b>simplecpp</b> package</li></ul> |   |
| ACHIEVEMENTS                  | <ul style="list-style-type: none"><li>• Member of the team (of four) that stood second runners up in Hackcon '14, Microsoft's national hacking contest, among nearly 250 teams from all over the country</li><li>• Winner at <b>Microsoft Appathon</b>, <i>code.fun.do</i> held at IIT Bombay in Spring 2014</li><li>• Participated in the software design competition at the 2014 Inter-IIT Technical Meet, where IIT Bombay stood 3rd overall.</li><li>• Podium positions in all freshmen robotics competitions:<ul style="list-style-type: none"><li>– <b>1<sup>st</sup></b> in <i>autonomous line follower</i> making competition,</li><li>– <b>3<sup>rd</sup></b> in <i>RC car</i> designing competition and</li><li>– <b>2<sup>nd</sup></b> in <i>RC football-playing bot</i> making competition</li></ul></li></ul>  |   |
| SELF<br>PROJECTS<br>AND HACKS | <p><b>Kapi</b>      <i>Microsoft code.fun.do</i>      <b>Spring 2014</b></p> <ul style="list-style-type: none"><li>• A <b>note-making app</b> that, along with normal text, typesets maths in <math>\text{\LaTeX}</math> format without having to write complicated code, rendered using <i>MathJAX</i> library</li><li>• Also lets the user draw diagrams and graphs on a canvas (rendered through HTML)</li></ul> <p><b>Rumor Roll!</b>      <i>Yahoo! HackU</i>      <b>Autumn 2013</b></p> <ul style="list-style-type: none"><li>• A website that displays links, tweets and videos related to rumors about the query</li><li>• Developed using a mashup of Yahoo! Boss API, Twitter API v2.0 and YouTube API</li></ul> <p><b>Android Desktop Controller</b>      <i>Institute Technical Summer Project (ITSP)</i>      <b>Summer 2013</b></p> <ul style="list-style-type: none"><li>• An Android application that uses Bluetooth to control PC through an Android mobile</li><li>• Used Java's <b>Robot</b> class to assign PC's features to commands passed by device as strings</li></ul>  |   |

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| PROFESSIONAL EXPERIENCE        | <b>Product Development Intern</b> <span style="float: right;"><b>Winter 2013</b></span><br><i>Tushky Events and Entertainment</i><br>Designed a Ranking Algorithm for events and their sellers based on social and analytic data and implemented it on real data.   |
| SCHOLASTIC ACHIEVEMENTS        | <ul style="list-style-type: none"> <li>• <b>All India Rank 104</b> (<i>State Rank 2</i>) among 3.75 lakh participants in <i>National Level Science Talent Search Examination (NSTSE) 2012</i> conducted by Unified Council</li> <li>• Secured <b>All India Rank 1</b> in <i>International Olympiad of Science (IOS) 2009</i></li> <li>• <b>All India Rank 53</b> (<i>State Rank 1</i>) in <i>National Science Olympiad (NSO) 2008</i> conducted by Eduheal Foundation amongst nearly 4 lakh participants</li> <li>• Opted for <b>Minor</b> in <i>Industrial Design</i></li> <li>• Amongst <b>top 0.005%</b> in AIEEE 2012, an exam taken by over a million students</li> </ul>  |
| PROGRAMMING SKILLS             | <ul style="list-style-type: none"> <li>• <b>Languages:</b> C++, Java, MIT-Scheme, Python, Rebol, Prolog, L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub></li> <li>• <b>Web Development:</b> HTML5, CSS3, PHP, JavaScript</li> <li>• <b>Engineering Softwares:</b> MATLAB, SCILAB, LabView</li> <li>• <b>Environments:</b> Windows, Linux</li> </ul>   |
| POSITIONS OF RESPONSIBILITY    | <div> <b>Manager, Web and Coding Club, IIT Bombay</b> <span style="float: right;"><b>April 2014 – Present</b></span><br/>           Manager 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.         </div> <div> <b>Web Secretary, Hostel 3, IIT Bombay</b> <span style="float: right;"><b>April 2013 – March 2014</b></span><br/>           Elected as Hostel Web Secretary for Hostel 3. Responsibilities include:           <ul style="list-style-type: none"> <li>• Conducting intra-hostel web development workshops and competitions.</li> <li>• 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</li> </ul> </div> <div> <b>Coordinator, TechFest 2014</b> <span style="float: right;"><b>May 2013 – January 2014</b></span><br/>           Introduced animation effects on the website for TechFest 2014 using jQuery plugins and coordinated a workshop on Swarm Robotics.         </div> |
| EXTRA CO-CURRICULAR ACTIVITIES | <ul style="list-style-type: none"> <li>• Worked as a market analyst at Startup Today (a crowdfunding startup)</li> <li>• Participated in several speaking events, including <b>MUNs</b>, <b>debates</b> and <b>extempores</b></li> <li>• A newbie FOSS contributor, familiar with working on large codebases (like Mozilla)</li> <li>• Written many blogs, including <b>Web Development</b> blogs for <i>Web and Coding Club</i></li> <li>• Active user on <b>Sphere Online Judge (SPOJ)</b>, <b>HackerRank</b> and <b>Stack Overflow</b></li> <li>• Completed the year-long course by <b>National Sports Organization (NSO)</b> in <b>Squash</b></li> <li>• Enthusiastic in swimming and water adventure sports like Scuba</li> <li>• Worked as an organiser in Mood Indigo 2012, TechFest 2013 and E-Summit 2013</li> </ul>   |
| KEY COURSES UNDERTAKEN         | <b>Core:</b><br>Data Structures, Abstractions and Paradigms in Programming, Software Systems, Design and Analysis of Algorithms, Logic Design, Computer Programming and Utilization, Discrete Mathematics, Introduction to Machine Learning, Human Computer Interactive Design<br><b>Other:</b><br>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<br><b>Online Courses:</b><br>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)   |