Sagar Chordia
Computer Science & Engineering
Undergraduate Third Year.(Bachelors of Technology)
Indian Institute of Technology, Bombay
DOB: 14 December, 1991

ACADEMIC RECORDS:
- Graduation   :   IIT Bombay (2009-2013)   CPI - 9.62
- Intermediate : Sir Parashurambhau College (2009)   Percentage – 90.17
- Matriculation: Muktangan English School (2007)   Percentage – 91.38

ACADEMIC ACHIEVEMENTS:
- Department **rank 4** out of 75 students after second year.
- Secured **All India Rank 82** in IIT Joint Entrance Exam (2009) out of about 4 lakh entrants.
- Secured **All India Rank 119**, State Rank 16 in AIEEE (2009) out of about 10 lakh entrants.
- Secured **AA** grade in Graph Theory course (only 2 out of 42 students). Awarded **AP** grade (exceptional performance) in the Modern Physics course.
- Secured 12th rank in onsite and **12th rank** in online **ACM International Collegiate** Programming Contest Regionals-2010 held at Amritapuri, Kerala.

OLYMPIADS:
- Awarded **Gold medal** in **Indian National Physics Olympiad (InPhO), 2009** for being among the top 37 candidates out of 34707 candidates.
- Awarded **Gold medal** in **Indian National Chemistry Olympiad (InChO), 2009** for being among the top 35 candidates out of 29165 candidates.
- Placed in National top 1%.in **Astronomy Olympiad** -2009. Qualified **RMO**,2008 (Regional Mathematics Olympiad) and selected for INMO (Indian Mathematics Olympiad).

FELLOWSHIPS AND SCHOLARSHIPS:
- Honored with prestigious **KVPY** (Kishore Vaigyanik Protsahan Yojana) fellowship in 2007, by Indian Institute of Science (IISc), Bangalore. Scholarship awarded to only **125 students** in India.
- Awarded **NTSE** (National Talent Search Examination), scholarship awarded to **top 750** students across India.
- Received IIT Institute scholarship for outstanding Academic performance. Awarded CBSE merit scholarship for excellence in AIEEE.

COURSES TO BE COMPLETED BY SUMMER -2012:
- **Pursuing Minor in Statistics.**
- **Major Core Courses**
  - Design and analysis of Algorithms, Graph Theory, Automata theory and Logic, Logic Design
  - Database and Information Systems, Operating Systems, Computer Architecture, Computer Graphics
  - Computer Networks, Artificial Intelligence, Embedded Systems.
- **Relevant Non-core Courses**
  - Calculus, Differential Equations, Linear Algebra, Introduction to Numerical analyses.
  - Introduction to statistical analysis, Economics, Marketing Management
  - Modern Physics, Chemistry, Engineering Drawing, Workshop

INTERNSHIP AND PROJECTS:

- **INRIA-**Sophia Antipolis, France **- Pierre Alliez,** Senior researcher**, Geometrica** group   http://www-sop.inria.fr/geometrica/ – Internship, May 2010 till July 2010 on:
  Shape Approximation and reconstruction using Visibility
  o Developed and implemented algorithm for constructing minimum-vertex piecewise-linear approximation of boundary of all 2-D objects inside tolerance volume.
  o Concepts like minimum nested polygon, minimum link path, visibility graph were used to explore this new approach of shape reconstruction.
  o Programmed and verified results using CGAL library, VisiLibity library, OpenGL and Qt. Extended method to a direction in 3D case.

- **Personalized News Aggregator**   *On-Going Project(2011)*
  o Developing application which aims at providing personalized news to user depending on his preferences. News is gathered from multiple sources
  o Developing back-end database to store categorization of news and preferences of user.
  o Developing algorithm for giving relevant top stories depending on user preferences, access region and time of news.

- **Composite Traffic Signal Control Strategy**   *On-Going Project(2011)*
  Project by: Centre for Development of Advanced Computing and IIT Bombay
  http://www.intranse.in/its1/content/second-generation-cosicost
  o Using SUMO (Simulation of Urban Mobility) open source traffic simulation software and modifying it to simulate Indian traffic conditions where lane discipline is hardly followed.
  o Developing Code to get detector count of traffic volume and thus achieving real time traffic monitoring.

- **Map interface using K-dimensional (Kd) Tree data structure:**   **(***Autumn 2010)*
  o Given a map, points are extracted from it and stored it in Kd- data structure.
  o Using this data structure methods like location of point, nearest neighbour of point, clustering in map etc could be computed efficiently in logarithmic times.

- **Reversi**   *Course project (Spring 2010)*
  Guide: Prof. Amitabha Sanyal,   *CSE Dept., IIT Bombay*
  o Simulated Reversi (Othello), a board game involving abstract strategy in the **functional programming** language 'Dr Scheme'. The program allows user to play against computer which uses **Minimax algorithm**, with **Alpha-Beta pruning** for efficiency, with many other optimizations.

- **UID (Universal Identification Project) for IITB**   *Course project(Autumn 2009)*
  Guide: Prof. Deepak B. Phatak   *CSE Dept, IIT Bombay*
  o Created a **"Duplicate Detection"** module in *mini-UID*, a unique identification project (using Finger-print as unique identifier) in C++. The main idea in the project was to compare polar coordinates of minutiae in fingerprint by using rotation in different reference frames and principle of invariance of centre of mass.

- **Technical Projects**
  o Designed and engineered glider, autonomous glider launcher and initiator using only stored mechanical energy and thus winning second prize in General Championship-I.
  o Awarded for writing two technical essays for product design competition on improving efficiency of internal transport system in IITB.

POSITIONS OF RESPONSIBILITY:

- DAMP (Department Academic Mentor Programme)   *2011-2012*
    - Part of core team responsible for guiding and mentoring academically backward students of Computer Science department.
- Technical Secretary of Hostel   *2010-2011*
    - (Coordinator of 450 hostelmates in institute level technical activities).
    - Led hostel to **first** position in overall Technical General Championships.

EXTRA-CURRICULAR:

- TECHNICAL
    - Awarded the **Institute Technical Special Mention,2011** and **Hostel Technical Colour,2011** for excellence in various technical activities.
- AWARDS
    - Felicitated with 'The Times of India'-Student of the year award, 2006. Award was given to only one student across all schools in Pune under TOI-NIE programme.
    - **Most creative student award** in school in 2006*,* Best boy student award in school in 2007.
    - Awarded **Hostel special mention** for **excellent Organizational work** as Technical secretary (2010-2011)
- ADVENTURE SPORTS:
    - 26 day Trek in Himalayas under *Basic Mountaineering Course* conducted by ABVIMAS, Govt. of Himachal Pradesh, India. Got A grade and Best Rope Award in this camp.
- DRAWING:
    - Won national level prize in Camel-Jyoti Drawing competition for drawing and painting 'Fair in City'
    - Won state-level prize in Unicef Drawing Competition and various other drawing competitons.