



Sonika Malloth
Computer Science & Engineering
Indian Institute of Technology, Bombay

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UG Third Year (B.Tech.)
Female
DOB: 30-05-1992

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2011	7.21
Intermediate/+2	Intermediate Board, AP	Vijaya Ratna Junior College	2009	96.00
Matriculation	CBSE	Nalgonda Public School	2007	95.40

ACADEMIC ACHIEVEMENTS and AWARDS

- Secured CATEGORY AIR 08(4969) in **IIT-JEE** 2009.
- Selected for SATISH DHAWAN CAMP held at **ISRO** for securing District **1st** in Central Board of Secondary Education , India.
- Awarded **NTSE** Scholarship for clearing 2 levels and interview in 2006-2007.
- Awarded Overall Excellence Award for Academic Excellence in 2006-2007.
- Awarded Scholarship by Board of Intermediate for securing 96% in 2008-2009.

PREVIOUS INTERNSHIPS

- **PROJECT INDICATOR – AIRTEL Company :**
Topic: Use of Automation in VBA to create an interactive PowerPoint Application.
Description : Excel Macros are created to interpret large excel files from database and feed the input in proper format to the PowerPoint. PowerPoint Macros assign indicators to the sites in slideshow which change colors depending on threshold values of KPIs.

KEY ACADEMIC PROJECTS

1. **CREATING A DATABASE in C++ programming language**
Guide: Prof. Deepak Phatak [Autumn-2009]
 - A team of 80 students worked on the **INSTITUTE Project FINGER PRINT DETECTION MACHINE programming code.**
 - Our team of **4** worked on the applications of the **finger print detection machine** like recording the attendance of students etc.
2. **BATTLESHIPS**(Made an executable program using Graphic library's writing code in **SCHEME programming language**)
Guide: Prof. Amitabh Sanyal [Spring-2009]
 - A team of 2 developed the game similar to Battle Ships Game on **Miniclip** Website.
 - It required the knowledge of **ARTIFICIAL INTELLIGENCE** and **GUI** to create the Human Vs Computer Game.
3. **WEB SEARCH ENGINE**
Guide: Prof. Damani [Autumn-2010]
 - A team of 3 implemented a simple search engine. We prioritized the search results depending on the **Page Rank** technique similar to that of **GOOGLE**.
 - The data has been downloaded into data base by open source **crawlers wget and htmlparsers.**
 - Special data structures like priority queues were used to rank pages according to wordIDs and docIDs.

4. TRAFFIC SIGNAL SIMULATOR

Guide: Prof. Vedagiri [Autumn-2011]

- Using Queues with special attributes of weight (depending on the characteristics of vehicle on a road) each road is assigned weights.
- Traffic signal is simulated to prevent congestion of roads depending on weight characteristics of roads at an intersection.

TECHNICAL SKILLS

- **Programming skills:** C, C++, Scheme (LISP like language), HTML, LATEX, VBA, Shell Scripting, Perl, SQL, MATLAB, SCILAB and Microcontrollers.
- **Software:** Adobe Photoshop, 3D MAX, MAYA, MS Office, NetBeans.
- **Operating Systems:** Microsoft Windows, Ubuntu.

COURSES UNDERTAKEN

Computer Science and Engineering	Data Structures, Algorithm Design, Discrete Structures, Automata Theory, Computer Architecture, Operating Systems
Civil Engineering(<i>Minor</i>)	Engg Mechanics, Engg Drawing, Transport Engineering
Basic Sciences	Calculus, Linear Algebra, Differential Equations, Numerical Analysis, Modern Physics, Chemistry, Intro to Electronics
Other Courses	Economics, Environmental Sciences, Instrumentation and Measurement, Data Analysis, Reading Literature

POSITION OF RESPONSIBILITY

- **Organizer** of MOODINDIGO 2009 Media Team.
 - Worked for the Media Team and helped in the media coverage of MOODINDIGO.
 - Worked for **KHOON CHALA** – the BLOOD DONATION CAMP.
- **Organizer** in the E-CELL (Entrepreneur Cell) of IIT BOMBAY.

EXTRA CURRICULAR ACTIVITIES

- Secured 1st in **Video Making** and 3rd in **Hindi Band** Performance- Drums at FRESHIZZA 2009.
- Secured 4th in **LitMasters-Convergence 2011**, a poem writing competition of IITB CS festival.
- Participated in **F1 Race** conducted in the Institute, **Bascule Bridge** Competition in TECHFEST 2009.
- Qualified to the final level of **Pandora's Box** in TECHFEST 2010.

OTHER INTERESTS

- Interested in **Mechanics** of structures. Took a minor in Civil Engineering department.
- **Astronomy:** An active member of KRITTIKA-the Astronomy club of IITB and attended Observatory sessions and Field Trips organized by KRITTIKA.
- **Film and Media:** Attended workshops for film making, Script writing, Video Editing.
- Animation(Summer Course in Maya & 3D-Max), Photography, creative writing (Have a webpage of some of my poems), Tennis, Drums(Acquired basic skills over the past 1 year).