



Himanshu Agarwal
Computer Science & Engineering
Indian Institute of Technology, Bombay

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B.Tech.
Male
DOB: 03/08/1991

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	7.35
Intermediate/+2	CBSE	St. Johns Sr. Sec. School, Kota	2008	90.60
Matriculation	CBSE	Jawahar Navodaya Vidyalaya, Alwar	2006	86.80

SCHOLASTIC ACHIEVEMENTS

- Secured **All India Rank 50** in **IIT-JEE** among 320,000 students [2008]
- Among **National top 1%** in **Indian National Physics Olympiad (INPhO)** [2008]
- Stood **6th** in **Indian National Mathematics Olympiad**, qualified **1st** level [2008]
- Recipient of **CBSE Merit Scholarship** for securing position in merit list in AIEEE [2008 – 12]
- Received **IIT Bombay Heritage Fund Scholarship** for Academic excellence [2008]
- Awarded **Merit Certificate** for securing 83% in **National Mathematics Olympiad** conducted by **Delhi Association of Mathematics Teachers (DAMT)** [2005]

INDUSTRIAL EXPERIENCE

INFOSYS LIMITED, BANGALORE

[May '11 – July '11]

Developed **Handheld Device Application** which calculates the PIPELINE RISK SCORES, leading to on-time information about possibility of pipeline hazards. This can save a lot of product and life loss

- Reinforced and extended the work by preceding intern and successfully **Developed and Deployed Version 1.0** of application on **Blackberry Device** which talks to server for each query
- Analyzed the feasibility of removing the requirement of connectivity during execution
- Designed **Use Cases** and **Conceptualized Project Plan** for version 2.0, expected to perform the functionalities in **No Network** area
- Acted as a single point of contact to **Mobility Team** representing **Innovation Labs** of Infosys
- Witnessed Client demonstrations with the key clients from US.

VSOFTE SERVICES PVT. LTD., MUMBAI

[Dec '10]

Extending **APS SARAL Toolbox**, comprising tools dealing with **Devanagari, English fonts and their Alteration**

- Programmed various tools in toolbox like **APS SARAL Dictionary, Shabdankan, Number Conversion Tool (MS Office Add-on)**
- Developed dynamic libraries for the new fonts like **Millenium Varun, Aakruti-10**

INNOVATE EDU, MUMBAI

[May '10 – July '10]

- Streamlined contents of Basic Electronics and Engineering Physics aiming at UG students to make it more interactive

KEY ACADEMIC PROJECTS

FACELOOK – SOCIAL NETWORKING AND EVENT PLANNING

[Aug '10 – Nov '10]

Developed web based application allowing users to connect with each other and to manage their events

- Used **E-R Models** to design database and normalized it to **3NF Normalized form**
- Used **JSP, Java Servlet** as programming environment and **Oracle** as backend database

ROBOT CREATING IMAGE REPLICA USING RANGOLI

[Feb '11 – Apr '11]

Programmed a **Firebird V Robot**, which makes a **Rangoli** imitating the image taken wirelessly on floor

- Used **MATLAB** for image processing and **Zigbee** for wireless communication
- Extendible to various commercial applications including **alternate to printing machine** or to draw **large Rangolis** in malls

TRAVEL GUIDE WEB APPLICATION

[Aug '10 – Nov '10]

Developed an application to guide tourists, telling the optimized path and nearby Tourist places, Restaurants

- Used **MVC (Model View Controller)** model of programming in **java** and **MySql** as backend database
- Maintained record of previous searches aiming to provide suggestions seeing past searches revolving around that period

VIRTUAL MEMORY AND FILE SYSTEM

[Aug '10 – Nov '10]

Implemented and tested a fully functional dummy operating system

- Implemented OS view of virtual memory using **page tables** and **LRU Replacement Policy**
- Implemented File System functions like **creating a file, Path traversal, Disk access**
- Programmed various terminal commands like **cd, ls, mkdir, history**

ARTIFICIAL INTELLIGENCE MINI PROJECTS

[Jan '11 – Apr '11]

Implemented a series of **Artificial Intelligence Algorithms** & solved a series of real life problems using these

- Implemented generic **A Star Algorithm** using java language and used it to solve **8 puzzle problem**
- Developed a **Part Of Speech annotator** by implementing **Hidden Markov Model**, trained it and achieved an efficiency of about 94%
- Utilized Prolog to translate English sentences into predicates and logically resolve whether the sentence is true or false based on given statements

OTHER ACADEMIC EXPERIENCES

- **SEMINAR - EMOTIONAL INTELLIGENCE (AI)** – Analyzed various models of emotional intelligence; techniques to make emotionally intelligent machines
- **DATA STRUCTURES** – Implemented 234-Trees, Red Black Trees
- Implemented a famous British Game **Othello** using **Scheme and Doctor Scheme Graphics Library**
- **SEMINAR - UTILITARIANISM VIEW OF LIFE (PHILOSOPHY)** – Defined **Greatest Happiness Principle, Hedonistic Utilitarianism** and explained **Bentham and Mill's principle of Utilitarianism**

POSITION OF RESPONSIBILITY

MANAGER, WEB & CREATIVES, CONVERGENCE

[Dec '10 – Mar '11]

Part of Core Team to conduct **Computer Science and Engineering Annual Flagship event, Convergence**

- **Co-founder of the festival**; Transformed a workshop (3 years back) into a complete festival
- Headed a 10 member team to develop the website of festival, which received more than 10k hits
- Developed and programmed online treasure hunt, **aMAZE** with over 1000 participants
- Established effective **PUBLICITY AND AMBIENCE PLAN**, provided the required designs for same

PUBLICATION AND MEDIA SECRETARY, CSEA

[July '10 – Mar '11]

- Initiated Department Newsletter and Department T-shirt
- Increased the outreach of association events by **3 fold** using productive means of publicity

FILM AND MEDIA SECRETARY, HOSTEL – 6

[July '09 – Mar '10]

- **Pioneered Hostel Radio** of Hostel – 6, the first of its kind in IITB
- Led the hostel to achieve **3rd position** out of 14 hostels in **Inter Hostel Film Championship**
- Awarded **Organizational Special Mention** for my exemplary work as council member

EXTRA CURRICULAR ACTIVITIES

- Stood **3rd** at **Inter College Street Play Competition** at **Mood Indigo – 2009, Cultural Festival IITB**
- Performed at prestigious theaters of Mumbai like **Prithvi Theater** and **NCPA**
- Conducted a **Public Awareness Campaign** by performing street plays across Mumbai, mentioning harms of **excessive usage of cell phones**
- Handled the technical aspects of one act plays, **Rafi Sahab Ki Maiyat** and **Naali Ke Kutte**, first ever plays performed at NCPA from IIT Bombay
- In collaboration with **Innovate Edu**, Developed content for Engg. Physics and Basic Electronics aiming UG engineering syllabus during Summer 2010
- Attended 10 days NCC camp and **Awarded B-certificate by 2 MAH Engineering Regiment**
- Awarded **Cultural Special Mention & PAF Special Mention**, 2009-10 for remarkable participation