Ajay Kumar		08007020
Electrical Engineering		B.Tech.
Indian Institute of Technology, Bombay		Male
		DOB: 28/07/1990

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	6.62
Intermediate/+2	Rajasthan Board	R. S. S. S. Sr. Sec. School, Hanumangarh	2007	87.85
Matriculation	Rajasthan Board	R. S. S. S. Sr. Sec. School, Hanumangarh	2005	86.33

POSITIONS OF RESPONSIBILITY

MANAGER, EVENTS, THE ENTREPRENEURSHIP CELL, IIT BOMBAY   *Mar '10 – Feb '11*
Led a 2-tier team of 40 volunteers to conceptualize and execute events round the year

- **Vultures' Nest:** The Start-up funding platform
  - Increased upper market-cap of participating start-ups and transformed pitching session from television show to close room event resulting in superior quality start-ups
  - Introduced **mock presentation sessions** to provide participating teams with adequate skills
  - Enabled the start-ups to secure overall angel funding of around **INR 20 million** for the **1st time**
- **Eureka'10** : Asia's Largest Business-Plan Competition (certified by **CNN, Thomson Reuters)**
  - Introduced a unique online **query solution** and **feedback platform** for all the **750** b-plan entries
- **Opiniate**: An extensive institute-wide entrepreneurship survey, **1st of its kind**
  - Reached out to more than **2000 students**
  - Conceptualized different activities round the year using the results
- **E-Garage:** A student-entrepreneurs' community
  - Organized **7 sessions** throughout the year by eminent speakers from business world
  - Assigned mentors and provided **funding opportunity** to students' team to launch their startup
  - Conducted exciting business events like **Virtual Stock Market, Business Simulation Game, Intuit TxtWeb Challenge** to attract the student community towards entrepreneurship
- **E-Summit:** A conglomerate of eminent speaker sessions, pitching sessions and networking events
  - Initiated **international tie-ups** for workshops and competitions on business modeling and entrepreneurship to provide world-class entrepreneurial resources to the attendees
  - Introduced for the **1st time** sector specific "networking lounges" enabling entrepreneurs to get instant expert opinion and references
  - Resulted in **30% increased** footfall in E-Summit

MAINTENANCE SECRETARY, HOSTEL-5, IIT BOMBAY   *Aug '09 – Apr '10*
- Initiated **renovation of hostel grounds** and construction of new **Frisbee and Badminton Courts**
- Introduced **door-to-door** and **online complaint system** to facilitate registering of maintenance issues

INTERNSHIPS

FORCE10 NETWORKS, DEVELOPMENT & TESTING, CHENNAI   *May '11 – Jun '11*
Implementation of Internet draft on "Traceflow - an extension to ping and traceroute"

- Reviewed the functionality and coding structure of existing **computer-network diagnostic tools** like Ping & Traceroute
- Developed the **software design** for "Traceflow" protocol including programming efficient algorithm and sophisticated software architecture using knowledge of TCP/IP protocols, switch architecture
- Devised optimum data structures and coding strategy **lowering time and memory required**: bringing down the overall cost of any system adopting this tool
- Established software as the most powerful tool to **diagnose** modern and future **complex networks** after implementing it in C at a **prototype** stage
- Gained exposure in cross fields like Force 10 Operating System and products (like Ethernet Switches) pursuing my interest in technology

PANKHUDI, NGO, MUMBAI *Dec '09*

Promotion of primary education and health awareness in Mumbai slums

- Conducted a survey of **100 kids** living in slum area about their family income, parental education, mother tongue, interests and current schooling which helped to channelize resources in right direction
- Prepared students' profile and monthly progress report including their personal and academic attributes which helped in students' focused learning

KEY ACADEMIC PROJECTS

UNDERGRADUATE THESIS *Aug '11 – till date*

Implementation of ethernet-communication on FPGA hardware using Verilog

- Developing an embedded implementation of scientific computing and multimedia task having the natural advantage of **low power and portability**
- Researching "Ethernet based communication" to create co-design with general purpose CPU boards and FPGA based boards to provide improved **performance per watt** as well as **energy & cost efficient** model
- Designing a prototype capable of doing **special purpose accelerated computing** using low power; having **usability to a wide range** of scientific, medical, business and consumer computing applications

ADVANCE COMPUTING FOR ELECTRICAL ENGINEERS *Aug '11 – till date*

Natural Language Processing (Sentiment Detection)

- Developing a software using C++ to **analyse the polarity of a given text** at the document, sentence level, whether the expressed opinion is positive, negative or neutral
- **Utility** of software is to detect polarity of product reviews, movie reviews or newspaper article

COMPUTER PROGRAMMING AND UTILIZATION – C++ *Aug '08 – Nov '08*

Graphics Painting Program

- Developed a graphics painting program like **MS-Paint** with user interface of mouse having options of drawing line, quadrilateral, circles and polygons
- Imparted range of true colors (**16 million colors**) with extensive use of the **Sprite graphics library**

OTHERS

TECHNICAL:

- Designed and built an all terrain vehicle -**ENDURO**, capable of moving both on land and water in **Techfest '09** (Asia's largest science and technology festival by IIT-Bombay) and shortlisted as **final 30 out of 250** participants
- Made an **autonomous Line-follower** using LED sensor which was designed to follow a white line on a black background throughout

CULTURAL:

- Secured **2nd** position in **Short-Movie** making competition in fresher's inter-hostel competition
- Performed lead role in **Fresher's Dramatics Competition** and volunteered in **Performing Art Festival** '09

SCHOLASTIC ACHIEVEMENTS:

- Scored **97%** in class 10th and **98%** in class 12th in **mathematics**
- Awarded **Indian Oil Company Ltd. (IOCL) Scholarship** for academic excellence in 2005 which is given **only to 250 students** across India

ADDITIONAL SKILLS

- Additional Courses Undertaken:
  - **Statistical and Mathematics:** Data Analysis and Interpretation , Probability and Random Processes, Complex Analysis, Differential Equations-II, Ordinary Differential Equations, Linear Algebra, Calculus
  - **Humanities & Energy:** Introduction to Economics, Environmental Studies, Philosophy, Introduction to renewable energy
- Proficiency in C, C++, Verilog (VHDL), Assembly Language with basic knowledge of **JAVA, HTML**
- Have experience of working on **MATLAB**, ModelSim, Xilinx, ANSYS, **Photoshop, Dreamweaver**