Anant Gupta   120050086
Computer Science & Engineering   **B.Tech.**
Indian Institute of Technology Bombay   Male
                                                   DOB: 02-06-1994

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2016	9.17
Intermediate/+2	CBSE	Scholars Public School	2012	93.60
Matriculation	CBSE	Bhavan Vidyalaya	2010	93.10

Pursuing a major degree in Computer Science with **honors**, and a **minor** in Management

SCHOLASTIC ACHIEVEMENTS

- **All India Rank 7** in IIT JEE among 500,000 candidates, highest scorer in Chemistry — 2012
- **All India Rank 2** in AIEEE among 1,000,000 candidates — 2012
- **All India Rank 1** in ISAT entrance exam among 80,000 candidates — 2012
- Secured **AP grade** for outstanding performance in MA 106 (Linear Algebra) — 2013
- Was among the 35 students in the country to clear the **Indian National Chemistry Olympiad**, and the **Indian National Physics Olympiad** and was invited for the respective camps — 2012
- Qualified for onsite nationals, **ACM ICPC** — 2013
- All India Ranks 2, 11 and 22 at Maths and Science Olympiads (organized by Silverzone and SOF) — 2010
- Obtained **Kishore Vaigyanik Protsahan Yojana** (KVPY) scholarship with an All India Rank 20 — 2011

INTERNSHIPS

ServiceWorker in Adsense   *Nikita Beloglazov*
Team Arrow at Google, Mountain View   2015

- Experimented with ServiceWorker API in Javascript and its compatibility with the tag based ads framework
- Implemented a complete infrastructure for enabling ad requests to be intercepted by service workers on the client after registration, installation and activation
- Developed logging (using IndexedDB) and reporting of fetch errors as a use case for service workers

Visualisation of Mobile Radio Networks based on SIMONE   *Prof. Thomas Kürner*
Technische Universität Braunschweig   2014

- Developed an ASP.NET web application in C# which uses the Google Earth plugin to display cell antennae, intensity maps generated on the server and other information pertaining to scenario instances
- Wrote javascript for ground overlays to create properly resizing directional icons for the cell antennae
- Created 'tree structure' for viewing/hiding the server data objects with asynchronous regeneration of maps

PROJECTS

Visible Light Communication   *Prof. Kameswari Chebrolu*   ongoing

- Developing a model which embeds information in TV content, to be decoded by smartphone cameras while providing hassle-free viewer experience, and achieving reliable data transfer for short ranges

Poisson Image Editing   *Prof. Ajit Rajwade*   Spring 2015

- Used interpolation machinery based on solving Poisson equations to perform seamless cloning (concealment, insertion, feature exchange) and selection editing (texture flattening, local color changes)

Geek OS File System   *Prof. D. M. Dhamdhere*   Spring 2015

- Implemented a basic File System for Geek OS including system calls and file commands
- Simulated disk cache in IOCS which uses the two-handed clock algorithm

Network Layer Simulation   *Prof. Varsha Apte*   Autumn 2015

- Created a Network Layer Simulator to assist visualization of packet forwarding in various routing algorithms
- Provided interfaces for development of higher layer protocols and demonstrated examples like Trace Route over UDP and ICMP like error messaging
- Visualized count-to-infinity and other problems in Distance Vector routing and Link State routing

DBMail   *Prof. Nandlal Sarda*   Autumn 2015

- Designed a JSP based email web application that uses PostgreSQL (RDBMS)
- Used ER diagrams to create normalized tables to enable efficient data representation and queries
- Created thread based reply and forward functionality

RAID simulation and Backup   *Prof. Nandlal Sarda*   Autumn 2015

- Used the Toy DB project and implemented a RAID system in parallel with the PF Layer
- Devised a live backup algorithm which utilizes free disk time to perform backup from RAID 01 to RAID 0
- Showed the effect of buffer size on time to backup and developed a failure recovery system

IIT Bombay Security Analysis   *Prof. Bernard Menezes*   Autumn 2015

- Analyzed IIT Bombay's network and web applications for security flaws
- Discovered vulnerabilities like Heartbleed, Apache based Denial of Service, Man in the Middle via ARP cache poisoning, SQL Injection, Cross Site Scripting

Simulation of Pistol   *Prof. Parag Chaudhari*   Spring 2014

- Developed a working model of the Glock 23 pistol using the Box2D physics engine, performed timing analysis by varying the number of iterations, and profiling

Mario   *Prof. Amitabha Sanyal*   Spring 2013

- Implemented a version of the video game Mario in DrRacket (Lisp) using Functional Programming
- Developed smart enemies, achieved stable FPS with calculated waits

TECHNICAL SKILLS/INTERESTS

Languages and Web: C++, Java, Scheme, Python, PostgreSQL, HTML, CSS, Javascript, ASP.NET, JSP, Prolog

Other skills: Linux, MATLAB, LaTeX, basic x86 and MIPS assembly

Additional Courses: Computer Vision, Parallel Computing, Machine Learning, Convex Optimization, Cryptography, Kernel Programming

EXTRACURRICULARS

- Participated in **Microsoft HackCon** India finals securing 5th team position in qualifiers   2015
- Completed a yearlong training in Badminton conducted by **National Sports Organization**   2012-13
- Secured 1st position in Opinions.com, an institute essay writing competition   2013
- Secured 3rd team position in institute Logic General Championships   2013
- Secured 1st team position in the annual dance competition for sophomores   2013
- Secured 2nd position in Freshmen hindi debate   2013
- Attended a two-week training programme entitled Introduction to Software Development organized by Infosys, Chandigarh to introduce school children to Information Technology   2009

POSITIONS OF RESPONSIBILITY

Teaching Assistant, CS 101 (Computer Programming and Utilization)   2015
- Helped students with lab assignments during regular and remedial sessions

Coordinator, E-Summit   2014
- Worked as a **Coordinator** for the Media department of E-Summit (the business fest of IIT Bombay)
- Guided journalists in the coverage of specific events and prepared event reports