

Shrey Banga

CONTACT INFORMATION

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EDUCATION

UNIVERSITY of NORTH CAROLINA at CHAPEL HILL, Chapel Hill, NC, USA

Master of Science in Computer Science, May, 2013 (expected)

INDIAN INSTITUTE of TECHNOLOGY ROORKEE, Roorkee, Uttarakhand, India

Bachelor of Technology in Electrical Engineering, May, 2009

CGPA: 8.143/10

NO.1 AIR FORCE SCHOOL, Gwalior, Madhya Pradesh, India

Higher Secondary Education, May, 2005

Percentage: 91.8%

EXPERIENCE

Google Inc., Mountain View, California

May - August, 2012

Software Engineering Intern - Chrome Speed Team. Created a tool for automatic regression alerts in Chrome performance. Fixed a WebKit bug which increases performance by a few percent. Analyzed the effects of DNS alias selection.

Adobe Systems Inc., NOIDA

January - August, 2011

Member of Technical Staff

- *Print Team.* Worked on improving and maintaining Camelot, the PostScript printing engine.

Center for Visual Information Technology, IIIT Hyderabad,

July - December, 2010

Project Engineer - Computer Graphics Virtual Lab. Designed a virtual lab for Computer Graphics, as part of a Government of India initiative for teaching sciences across colleges in India.

Deloitte & Touche, Hyderabad, India

June, 2009 to April, 2010

Consultant

- *Biometric and Smart-Card authentication solution.* Worked on integrating fingerprint and smart-card readers with an Identity Management solution already in place.
- *Vulnerability Assessment and Penetration Testing.* Performed security assessment of network infrastructure of several Fortune 500 companies and designed strategies to prevent attacks.

IBM India Software Labs, Bangalore, India

May, 2008 to July, 2008

Engineering Intern - EAR PlanCreator for Apache Geronimo. An ajax-based plugin for quickly creating deployment plans for enterprise applications.

PROJECTS

Computer Graphics

- *Whitted style raytracer.* Supports common primitives, cameras, projections, matrix transformations, shading models, texture mapping, reflection and refraction. **2003 - 2004**
- *Raytracer based on Greg Ward's radiosity* to simulate global illumination. **2004 - 2005**
- *L-systems* parser and renderer, used for rendering fractals and other shapes. **May, 2005**
- *Force-directed layout* to display complex relationships of objects interactively in flash. **July, 2007**
- *Monte-Carlo raytracer* to simulate global illumination and caustics. **2008 - 2009**
- *Kd-tree intersection accelerator* to improve rendering times of complex scenes. **February, 2010**
- *Scene file parser* implemented using flex/yacc. **July, 2010**
- *Graphics Virtual Lab* started by the Govt. of India, which will be used by colleges all over India. **August - December, 2010**

Android Development

- *DownloadAccelerator*. An Android app that accelerates downloads by splitting files into multiple parts and downloading them concurrently. **January - August, 2011**

Chrome Extensions

- *Google Mail Multi-Account Checker*. Shows multiple Gmail inboxes in a single pop-up, with common tasks such as delete, archive and mark as read. Over **16,000** users. **October, 2011**
- *Counter*. Counts your visits to websites and optionally blocks the page for a short time. **January - August, 2011**

Vim Plugin

- *IDSearch.vim* A front-end to GNU ID utils which adds find-in-files support to Vim for large projects where grep isn't fast enough. **January - August, 2011**

Machine Learning

- *Facial Expression Recognition* using a combination of Local Binary Patterns and SVM based classifiers. **January - May, 2008**

Microprocessors

- *Intel 8085A Emulator*. An emulator for the Intel 8085A microprocessor with a modern GUI, for use in teaching. **January - May, 2007**

Web Design

- *Watch Out! News Agency*. Designed the website for the students' news magazine of IIT Roorkee, as a member and Chief Web Coordinator.
- *Thomso'07 & Srishti'07* Designed websites for several cultural and technical festivals at IIT Roorkee.

CO-CURRICULAR ACTIVITIES

Software Development Section, Hobbies Club, IIT Roorkee

- Designed a Steganography application, a networked 2-player game and a website, all of which won awards at the annual exhibition, *Srishti*.

Programming Contests

- Third in *Code Sangram*, an *IEEE (Roorkee chapter)* programming contest.
- Participated in programming contests on CodeChef, SPOJ, CodeJam, Hacker Cup etc.

Literary Section, IIT Roorkee

- Organized and participated in several quizzes, debates and other events.

Member, Executive Editor & Chief Web Coordinator, *Watch Out! News Agency*,

- Edited, formatted and maintained the website for the students' news magazine, *Watch Out!*.

Chief Web Designer, *Thomso'07*, IIT Roorkee

- Conceptualized, designed and maintained the website for IIT Roorkee's youth festival.

COMPUTER SKILLS Languages

C, C++, Java, Python, JavaScript, HTML+CSS, 8085 Assembly, Bash script

Platforms & Tools

Visual Studio, Vim, MATLAB, L^AT_EX