

## SKILL SET

LANGUAGES **JavaScript** (Expert), **Python** (Proficient), **C++** (Proficient), **C** (Proficient)  
WEB DEV **HTML5**, **CSS**, **SQL** and **NoSQL**, **AngularJS**, **Nodejs**  
TOOLS **Git** (Expert), **Shell Scripting** (Proficient), **Vim** (Expert), **LaTeX** (Proficient)

## EDUCATION

CURRENT	B. Tech, COMPUTER SCIENCE AND ENGINEERING, <b>Indian Institute of Technology</b> , Kanpur	9.5/10.0
JULY 2011	12 <sup>th</sup> Board, CBSE Board, <b>The Emerald Heights International School</b> , Indore	91.4%
JULY 2009	10 <sup>th</sup> Board, ICSE Board, <b>The Laurels School International</b> , Indore	95.4%

## WORK EXPERIENCE

**Multi Factor Authentication in OpenVPN** 2014 - 2015  
MOZILLA WINTER OF SECURITY, Guillaume Destuynder, Professor Dheeraj Sanghi [\[Wiki\]](#)

- One of the **eleven** teams to be selected as a part of Mozilla's Winter of Security Initiative 2014.
- The objective of the project is to implement true **arbitrary multi-factor authentication** support in **OpenVPN**; and to implement **session-support** for the additional factors. [\[https://wiki.mozilla.org/Security/Mentorships/MWoS/2014/OpenVPN\\_MFA\]](https://wiki.mozilla.org/Security/Mentorships/MWoS/2014/OpenVPN_MFA)

**Research Intern** MAY-JULY 2014  
MICROSOFT RESEARCH INDIA, Bangalore

- Analysed the implementations of different distributed systems and databases architectures like **Google MapReduce**, **Google FileSystem**, **Google MillWheel** Yahoo! Pnuts, **Amazon DynamoDB**, **Apache Hadoop**, **Apache Storm**, **Microsoft Dryad**, and **Microsoft DryadLINQ** to understand the design decisions involved.
- Used **TPL Dataflow** and **Lightweight Tasks** to implement concurrent pipeline processing of messages in CScale to preserve processing order of partially ordered messages. Performed **performance testing**, **failure testing** of the existing infrastructure.

**Software Development Intern** MAY-JULY 2013  
AURUS NETWORKS', Bangalore

- Ported the legacy flash based web player in **CourseHub** – Aurus Networks' MOOC offering – to a technology agnostic **HTML5/JavaScript** web player leading to a uniform cross-platform viewing experience.
- Developed a **XMPP** based **real-time chat service** using Jabber framework, for conversations during live lectures.

## COURSE PROJECTS

**JavaScript to MIPS Compiler** WINTER 2013-2014  
COMPILERS, Professor Subhajit Roy [\[GitHub\]](#)

- Implemented an end-to-end ECMAScript 5.1 compiler for the MIPS architecture with support for first class functions, anonymous functions, static types, type annotations, recursion and nested functions. [\[https://github.com/srijanshetty/javascript-compiler\]](https://github.com/srijanshetty/javascript-compiler)

**Hindi author attribution** WINTER 2013-2014  
ARTIFICIAL INTELLIGENCE, Professor Amitabha Mukherjee [\[GitHub\]](#)

- Presented a poster on Opinion Word Expansion and Target Extraction through Double Propagation, Guang Qin, Bing Liu, Jiajun Bu, Chun Chen that was nominated as the best poster by all students.
- Generated a Hindi literature corpus consisting of works by Tagore, Vibhuti Narayan, Premchand, Sarat Chattopadhyay and Dhamarvir Bharati.
- Clustered a sample set of multiple Hindi authors using K-means unsupervised clustering to achieve F-scores in the range of 90-97% for each author.
- Classified each author using Support Vector Machine using Radial Basis Kernel function and achieved an F-score of 90-95% for each author.
- Performed Multiple Discriminant Analysis on the data for a quantitative comparison with word collocations; there was no appreciable difference in the results with the F-scores increasing only marginally. [\[https://github.com/srijanshetty/author-attribution\]](https://github.com/srijanshetty/author-attribution)

**NachOS** MONSOON 2013-2014  
OPERATING SYSTEMS, Professor Mainak Chaudhari [\[GitHub\]](#)

Monsoon semester: July to November  
Winter Semester: January to April

- Extended the standard system call library of NachOS and implemented system calls pertaining to Fork, Exec, Join, Yield, Sleep and Exit. [<https://github.com/srijanshetty/nachos-syscalls>]
- Implemented process scheduling algorithms: UNIX Scheduling, First in First Out, Round Robin, Shortest Job First and Non-pre-emptive job scheduling to assess their relative performances. [<https://github.com/srijanshetty/nachos-scheduling>]
- Programmed page replacement algorithms: Random Page Allocation, First in First Out, Least Recently Used(LRU) and LRU Clock to evaluate relative performances under difference scenarios. [<https://github.com/srijanshetty/nachos-final>]

### P2P File Sharing and Streaming and IP Spoofing

MONSOON 2013-2014

COMPUTER NETWORKS, Professor Dheeraj Sanghi

[[GitHub](#)]

- Conceived and implemented a peer-to-peer protocol for file and media transfer in Node.js to share data over any LAN. [<https://github.com/srijanshetty/nodesock>]
- Generated raw IP packets with spoofed IP addresses to exploit test machines with ARP Poisoning, Smurfing and SYN Flooding.

### Prolog Shortest Paths and Erlang Traffic Server

MONSOON 2013-2014

PRINCIPLES OF PROGRAMMING LANGUAGES, Professor Piyush Kurur

- Implemented shortest path algorithm in Prolog using Logic Programming on the Delhi Metro route.
- Implemented a simple traffic server in Erlang using message passing concurrency and tail call recursion.

### 8-bit General Purpose Computer on a FPGA

WINTER 2012-2013

COMPUTER ORGANIZATION, Professor Subhajit Roy

[[GitHub](#)]

- Designed and programmed a simple **Instruction set Architecture (ISA)** for a 8-bit General Purpose Computer with a **load-store** architecture on **Xilinx Spartan 3** FPGA using System Verilog. Demonstrated recursion, looping and conditionals on the Computer by using a simple assembly language.

### Conference Dates Web Crawler

WINTER 2012-2013

COMPUTING LABORATORY

[[GitHub](#)]

- Developed a **python based web crawler** to crawl paper submission deadlines for a given paper using BeautifulSoup and urllib. [<https://github.com/srijanshetty/crawler>]

## INDEPENDENT PROJECTS

### GNU/Linux Exploration

SUMMER 2012-2013

Programming Club, IIT Kanpur

[<http://bit.ly/pclubLinux>]

- Explored and documented the various facets of **GNU/Linux** like the file system, process management, memory management, shell interface etc to serve as a reference for the Student Community.

## SCHOLASTIC ACHIEVEMENTS, SCHOLARSHIPS AND CONFERENCES

2011-2014	Received an <b>A* grade</b> , for exceptional performance in <b>Systems and Network Security; Computer Networks; Computer Organization; Logic for Computer Science; Fundamentals of Computing; Introduction to Philosophy</b>
2012-2013	<b>Academic Excellence Award</b> , IIT Kanpur.
2011-2012	<b>Academic Excellence Award</b> , IIT Kanpur.
MAY 2011	Secured All India rank <b>1937</b> in Joint Entrance Exam (JEE)
JAN 2011	Kishore Vaigyanik Protsahan Yojana ( <b>KVPY</b> ) Fellowship
JAN 2010	Qualified <b>Regional Mathematics Olympiad</b> (RMO)
DEC 2009	<b>CSIR Programme on Youth for Leadership in Science</b> held at Advanced Materials Research Institute, Bhopal

## LEADERSHIP AND ARTISTIC SKILLS

Active blogger at [srijanshetty.quora.com](http://srijanshetty.quora.com)

[[BLOG](#)]

Hacker, Navya, FOSS Group IIT Kanpur

[<https://github.com/navya>]

- Promoted the **FOSS initiative** in campus by organizing **student lectures** and meet-ups.
- Built student-centric applications like **Course Search** and **Student Search**, to circumvent their legacy institute counterparts.

Head Logistics, Election Council, IIT Kanpur

[<https://github.com/elections>]

- Designed and created a new electronic voting system in consultation with the **Students' Senate** to facilitate smooth voting in General Elections 2015.
- Ensured full transparency in handling the finances of Election Council, IIT Kanpur and devised new methods to reduce the overall expenditure of the Council by 25%.

Head, Major Events and Competitions, Antaragni '14

2014

- Orchestrated Roadtrip – the National Campaign of Antaragni '14, under which national prelims for Nukkad, Dance, Quiz and Synchronicity were held in Pune, Mumbai, Chennai, Bangalore, Chandigarh, Bhopal, Lucknow, Kolkata, and Kanpur.
- Negotiated with leading academies of Dance, Musicals, and Fine Arts to provide mentorships, and other non-monetary incentives to the outstanding cultural performers in Antaragni under the banner of **Dream On** campaign.
- Coordinated the conduction of **fifty competitions and nine major events** with a team comprising of over **thousand volunteers**. Initiated and organized Mr. & Ms. Fresher's competition and introduced Chreo Night in Antaragni's arsenal of competitions.
- Organized a **blood donation camp** for the residents of IIT Kanpur to promote awareness about road accidents. Mobilized information about **road safety** through infographics and questionnaires via Antaragni's nation wide social campaign **Zara Sambhal Ke**.

#### Hospitality Coordinator, Antaragni '13

2013 – 2014

- Managed a team of **40 secretaries and 80 volunteers**, over a span of 8 months and ensured a flawless conduction of the festival.
- Chalked out the logistics of **hospitality and accommodation of 1500 participants** with four other coordinators. Handled security arrangements during the four days of the Festival from 24<sup>th</sup> to 27<sup>th</sup> October.

Member, Gymkhana Review Committee

2013 – 2014

Editor-in-chief, Vox Populi, the campus newsletter.

2013 – 2014

Senator, Students' Senate, IITK Y11 batch.

2012 – 2013

## VOLUNTEER WORK

#### Member, Institute Anti Ragging Committee

2014 – 2015

- Appointed as a member of the Institute Anti Ragging Committee, a **10 member committee** responsible for welfare of the newly admitted freshmen.
- Worked in tandem with the office of the Dean of Student Affairs, to organize sessions on **easing the transition of freshmen**. Ensured institute norms regarding humane treatment of freshmen are properly conveyed to all senior batches and worked towards the enforcement of those norms.

#### Tutor, English Proficiency Programme

2013 – 2014

Professor Bhaskar Das Gupta

- Worked as a **English tutor** in the pilot English Proficiency Programme to help **under-privileged students** obtain a functional knowledge of English.

Academic Mentor, Fundamentals of Computing, Professor Sumit Ganguly

2012 – 2013