

SKILL SET	LANGUAGES	JavaScript (Expert), Java (Proficient), Python (Proficient), C++ (Functional)
	WEB DEV	HTML5, CSS, SQL and NoSQL, React, Nodejs
	TOOLS	Git (Expert), Shell (Proficient), Vim (Expert)

## EDUCATION

JULY 2015	B. Tech, COMPUTER SCIENCE AND ENGINEERING, <b>Indian Institute of Technology</b> , Kanpur	9.6/10
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

**Policy in Action Fellow (Bangalore 2019)** JAN 2019 - FEB 2019

YOUNG LEADERS FOR ACTIVE CITIZENSHIP, YLAC

- Prepared a policy brief for an MP by having conversations with stakeholders and analyzing publicly available data on the topic.
- Understand the public policy landscape in Indian and learn about effective advocacy and sound policy making.

**Associate, Systematic Market Making** JAN 2019 - PRESENT

GOLDMAN SACHS, Bangalore

- Worked on Principal Liquidity Provision and systematic internalizer (SI) for the MiFiD II regime.
- Develop the monitoring infrastructure of the team using a variant of the TICKstack (Telegram, Influx, Grafana, Kapacitor) to have visibility over a cluster of over hundred processes co-located with exchanges across the globe.
- Scaled Java backend on vertx3 to live stream upwards of 5 million positions and trades to a React frontend by snapshotting data.
- Analysed and improved performance regressions of multiple applications, 5x decrease on network congestion by coalescing packets on ZMQ running our Event Sourcing infrastructure.
- Optimized PnL computations in python to over 3 million position changes by efficient use of concurrency in python.

**Analyst, Systematic Market Making** DEC 2017 - DEC 2018

GOLDMAN SACHS, Bangalore

**Analyst, Central Risk Book** JUNE 2015 - NOV 2017

GOLDMAN SACHS, Bangalore

- Analyzed various unwind and RENTD strategies for pro-active risk management, according to the alpha profile of flow.
- Built a resilient reference data framework which computes static data and stores in memory. Reduced application warmup time from 2-3 hours to few minutes. Optimized cache buildup times 1000x.
- Designed a low latency block pricing REST service in Java and Vertx; dynamically adjusting quotes for volatility and volume in market. Reduced pricing time from few seconds to few milliseconds.
- Created a framework for realtime functional monitoring of processes using D3.js.
- Overhauled the UI/UX with a React/Redux based solution on the frontend and a Vertx3 based REST backend to bring our interfaces closer to the industry.
- Developed the end-to-end full-stack infrastructure for centralizing FX & Delta risk of internal desks, with a dynamic team working on a tech stack of Vertx, Java, React, Redux and proprietary systems.
- Generated an automated data certification and analytics framework which served as the gold standard for data driven policy decisions.

**DevOps Engineering** MAY - JUNE 2015

KLOZEE, Bangalore

- Automated developer operations by creating a heroku style push to deploy model on AWS, reducing development time.
- Worked full stack on Express, Angular, Node and Angular to create an apparel store for the web app.

**Multi Factor Authentication in OpenVPN** 2014 - 2015

MOZILLA WINTER OF SECURITY, Guillaume Destuynder, Professor Dheeraj Sanghi

[\[Wiki\]](#)

- One of the **eleven** teams all over the **world** to be selected as a part of Mozilla's Winter of Security Initiative 2014.
- The objective of the project was to implement true **arbitrary multi-factor authentication** support in **OpenVPN**; and to implement **session-support** for the additional factors.
- The project presentation is archived at <https://air.mozilla.org/mwos-2014-openvpn-mfa/>.
- The wiki for the project is located at [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**, **Amazon DynamoDB**, **Apache Hadoop**, 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.

## INDEPENDENT PROJECTS

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#### VS-3, Electronic Voting

WINTER 2014-2015

Election Council, IIT Kanpur

[\[GitHub\]](#)

- Designed and created a new electronic voting system in consultation with the **Students' Senate** to facilitate smooth electronic voting in the campus.
- The voting system was subsequently used in Students' Gymkhana General Elections, Hall 8 HEC Elections, Hall 2 HEC Elections and Hall 4 HEC Elections.

#### VANI - Voicing Archiving and Networking Information

SUMMER 2012-2013

Professor Manidra Agarwal, Professor T. V. Prabhakar

- Initiated the creation of VANI - an extensible community platform with applications for forums, wikis, search, lost and found and calendars.

## AWARDS AND ACHIEVEMENTS

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2011-2015	Students' <b>Gymkhana Leadership Award</b> , IIT Kanpur.
JAN 2011	Kishore Vaigyanik Protsahan Yojana ( <b>KVPY</b> ) Fellowship
DEC 2009	<b>CSIR Programme on Youth for Leadership in Science</b> held at Advanced Materials Research Institute, Bhopal
2014-2015	<b>Academic Excellence Award</b> , IIT Kanpur.
2014-2015	<b>Academic Excellence Award</b> , IIT Kanpur.
2012-2013	<b>Academic Excellence Award</b> , IIT Kanpur.
2011-2012	<b>Academic Excellence Award</b> , IIT Kanpur.

## LEADERSHIP SKILLS

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Chief Election Officer, Election Council, IIT Kanpur	2014 - 2015
Head, Major Events and Competitions, Antaragni '14	2014 - 2015
Editor-in-chief, Vox Populi, the campus newsletter.	2013 - 2014

## VOLUNTEER WORK

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Member, Institute Anti Ragging Committee	2014 - 2015
Tutor, English Proficiency Programme, Professor Bhaskar Das Gupta	2013 - 2014
Academic Mentor, Fundamentals of Computing, Professor Sumit Ganguly	2012 - 2013