

Sambhav Satija

LOVES THINKING ABOUT SECURITY, NETWORK & SYSTEM DESIGN

IIIT-Delhi, New Delhi, India

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Skills & Education

Education **B.Tech - Computer Science and Engineering. IIIT-Delhi** — CGPA 7.71/10

Languages **Python, C** — Java, JavaScript

Tools **git, Django** — Android, memcached, nginx

Experience

Tower Research Capital LLC

Gurgaon, India

CORE ENGINEERING SOFTWARE DEVELOPER

January 2018 - current

Working on migrating the existing SDLC to a new pipeline. Also contributing to the effort to evaluate different methods for improving compile times.

Microsoft Research

Bangalore, India

RESEARCH INTERN | RESEARCHER: JACKI O'NEILL - TECHNOLOGY FOR EMERGING MARKETS

January 2017 - July 2017

Worked on developing technological interventions to improve loan adherence in low income communities.

The portal has been handling loan payments of ~300 auto drivers, with ~100 financial transactions per week since March '17.

Google

Bangalore, India

SOFTWARE ENGINEERING INTERN | MANAGER: MANSOOR ALICHERRY

May 2016 - Jul. 2016

- Worked on a POC API endpoint for partners, improving upon the provided technical design document by making the architecture more secure and extensible.
- Learnt Google frameworks(Guice, Mockito, Bazel, Closure) and tools (Hibernate, Google Cloud PubSub, GCM, CloudSQL) to create a Java server on the AppEngine platform and a Chrome extension.

IIIT-Delhi

New Delhi, India

DEVELOPEMENT INTERN

Apr. - Jul. 2014, Apr. - Jul. 2014

Developed and deployed a portal which streamlined the management of a mandatory course. I shifted from a procedural design to an event driven design in Django for independently controlling APIs and caches.

Achievements & Honors

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|--------|---|-------------------|
| 2017 | Grand Prize Winner — AngelHack - Bangalore | Bangalore |
| 2016 | Finalist — 3rd in Indian leg of CSAW Finals organised by NYU. | CSAW, NYU |
| 2015/6 | Finalist - twice — Build The Shield security CTF. 2 nd in nationwide qualifiers (2016). | Microsoft, India |
| 2015 | Winner — Pentesting security CTF by PricewaterhouseCoopers | IIIT-Delhi, India |
| 2016 | Second position — Pentesting security CTF by ISGF-India | ISGW 2016 |
| 2015 | Winner - IBM — AngelHack, New Delhi. | New Delhi, India |
| 2015 | Winner - Pebble — HackIndia. | Bangalore, India |
| 2016 | RGSOC Coach — Coach for team working on PyBee VOC project. | Rails Girls SoC |

Research

- 2016 - ~ **SocialMixer - Anonymous document sharing** — Ongoing research with Dr. Sambuddho Chakravarty on creating an anonymous document sharing network
- Prayana** — A short technical paper in ICTD '17 (with Microsoft Research) on creating a flexible system which handles the nuances of repayment allocations of a multi-source loan, while giving contextual information.
- 2017 **Prayana: An Intermediated App for Loan Management in Resource-Constrained Settings** — Conditionally accepted paper (with Microsoft Research) in CHI '18 on designing an intermediated financial management app which enhances the collaborative work of loan management between the loanee and the collector.
- 2017

Projects

- 2016 **Real time raytracer in C++/CUDA** – Implemented BVH to achieve 760X speedup. Implemented threadsafe worker queues to fix disproportionate workload and allow infinite ray bounces.
- 2015 **Geometric constraint solver in C++/Qt** – This could convert scribbles to neat sketches. It understood tons of nested snapping techniques dealing with line segments and circles, like endpoint, center, tangent, parallel line and equal line length snapping.
- 2013 **FindMyStuff** – Developed, deployed and maintaining a Google Maps and Facebook based lost & found portal in Django.

Responsibilities & Misc.

- 2015-16 **Teaching Assistant** – 2 courses: Operating Systems & Data Structures and Algorithms *IIT-Delhi*
- 2015-16 **Problem Setter** – HackCon '15, HackCon '16, Scripting Challenges v1/v3/v5 *IIT-Delhi*
- 2014-16 **Speaker** – Core and introductory talks on Git, Django and Flask during college sessions. *IIT-Delhi*