

SATVIK RAMAPRASAD




4th Year Computer Science Student at IIIT-Bangalore, Expected graduation in 2021

[in linkedin](#) [Codeforces - Candidate Master](#) [Project Portfolio](#) [+91 725 966 3454](#) [@ satviksr@gmail.com](#)

EDUCATION

- August 2016** **International Institute of Information Technology - Bangalore (IIIT-B)**
Present [➤ Integrated M.Tech. in Computer Science, 8th Semester, expected graduation in 2021 \(5 year course\)](#)
[➤ Cumulative GPA: 3.93 / 4.00](#) [Transcript](#)

EXPERIENCE

- GOOGLE | SOFTWARE ENGINEERING INTERN** MAY 2020 - PRESENT
[➤](#)  I am interning in the Google Docs team. I am developing a library in Apps Script which emulates the behavior of APIs in VBA that access local file systems. The library consists of file handling APIs, FileIO APIs and spreadsheet APIs.
- GOOGLE SUMMER OF CODE | ORGANIZATION ADMIN** [CircuitVerse Org](#) [GSoC Page](#) MARCH 2019 - PRESENT
[➤](#)  I am the creator and maintainer of an open source organization [CircuitVerse.org](#) which has been accepted as a mentor organization for Google Summer of Code in 2019 and 2020. I guide and mentor several students in GSoC and similar programs. Read project CircuitVerse for more details.
- MOSIP | INTERN** [Mosip.io](#) JANUARY 2019 - MAY 2019
[➤](#)  MOSIP - Modular Open Source Identity platform. **MOSIP is an international project funded by world bank** which is a global effort to develop an open source foundational ID system (like Aadhar) for governments to use. I worked on the test rig as part of independent verification and validation and designed the MOSIP Biometric Device compliance tool.

SKILLS AND INTERESTS

Skills - Strong programming and debugging ability, Database Systems, Distributed Systems, System Design, Web Development, Project Management, Programming Languages, Product Design, Computer Graphics, Linux and Production Systems, Dev Ops
Technologies - C++, Python, Javascript, Rails, React, MySQL, PostgreSQL, Git, OpenGL, Tableau
Interests - Scalable Architectures, Cloud Computing, Distributed Databases, Graphics, Rendering, Simulations

ACHIEVEMENTS

- [➤ Competitive Programming:](#) Ranked as one of the top 300 coders in India on Codeforces with maximum rating of **2050**. Current ranking is **Candidate Master**.
- [➤ Competitive Exams:](#) JEE Mains - AIR 803, BITSAT Score - 382, Kanataka CET Rank - 76, ComedK rank - 10, Gate - AIR 591
- [➤ ACM-ICPC \(Regionals\) – 2019:](#) Ranked 23th all over India out of 2800+ teams in ACM ICPC Asia Kharagpur contest.
- [➤ Dean's Merit List:](#) I am in the Dean's Merit List 2017, 2018 and 2019 for academic excellence. I have received merit scholarship for the same.

PROJECTS

- [➤ CIRCUITVERSE | FOUNDER AND TEAM LEAD](#) [CircuitVerse.org](#) FEB 2017 - PRESENT
CircuitVerse is a platform to create, share and learn digital circuits. Currently the platform is used internationally by several professors from across the world including some from University of Chicago, University of Alabama and Virginia Tech. **I am the primary developer and maintainer of this open source project. CircuitVerse got accepted as a mentor organization for Google Summer of Code twice.** As of July 2020, CircuitVerse has had about 3.4 Million Page Views and about 320K users have used the platform.
[Data-structures and Graph Algorithms](#) [Simulation](#) [Digital Logic](#) [JavaScript](#) [Ruby On Rails](#) [PostgreSQL](#) [Product Design](#) [Project Management](#)
- [➤ COLUMN STORE DATABASE | PROJECT TEAM LEAD](#) [Project Report](#) JANUARY 2020 - MAY 2020
Lead a team to undertake development of a Column Store database from scratch with a focus on query processing. The query processor can handle any SQL like query with support for filtering, projection, joins and aggregations.
[C++](#) [CMake](#) [Boost](#) [Column Store Database](#) [Design Patterns](#)
- [➤ TOY DISTRIBUTED CACHE | PERSONAL PROJECT](#) [Project Report](#) JANUARY 2020 - MAY 2020
Built a toy distributed cache system as an experiment. Experimented with various parameters like replacement policy, cache size, node count and query load.
[C++](#) [CMake](#) [Boost](#) [Gossip Protocol](#) [Multithreading](#) [Networking](#) [Membership Lists](#) [Design Patterns](#)
- [➤ REAL-TIME VOLUMETRIC RENDERING | PERSONAL PROJECT](#) [Project Report](#) AUGUST 2019 - DECEMBER 2019
Built a system to render volumetric data in real time using multi-texture based rendering technique from scratch. The transfer function can be changed during run time via a graphical interface.
[C++](#) [CMake](#) [OpenGL](#) [Shader Programming](#) [Graphics](#) [Volumetric Rendering](#)
- [➤ DISTRIBUTED COMPUTING CONCEPTS | SELF STUDY](#) [Self Study Report](#) AUGUST 2019 - DECEMBER 2019
I undertook a self study on Distributed Computing. I studied various concepts like Gossip Protocol, Membership lists, Database Sharding, Consistent Hashing, Time and Ordering in distributed systems, Paxos consensus algorithm etc. I read papers on distributed systems - Cassandra, Google Big Table, Dynamo DB and Google File System.
[Cassandra](#) [Google Big Table](#) [Dynamo DB](#) [Google File System](#)

For an exhaustive list of projects, please check my [Project Portfolio](#)