SATVIK RAMAPRASAD

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

in linkedin 🝷 Codeforces - Master 🔘 Project Portfolio 🚨 +91 725 966 3454 🔘 satviksr@gmail.com

EDUCATION

August 2016 International Institute of Information Technology - Bangalore (IIIT-B)

Present

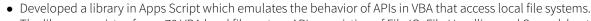
- > Integrated M.Tech. in Computer Science, 8th Semester, expected graduation in 2021 (5 year course)
- > Cumulative GPA: 3.93 / 4.00 (98 %), University Topper, Transcript





GOOGLE | SOFTWARE ENGINEERING INTERN, GOOGLE DOCS TEAM

MAY 2020 - JULY 2020



The library consists of over 70 VBA local file system APIs consisting of File IO, File Handling and Spreadsheet APIs.

• Setup a complete test system consisting of 5 modules which validates the APIs for VBA spec compliance.

GOOGLE SUMMER OF CODE | ORGANIZATION ADMIN



- Creator and Team Lead of an open source organization CircuitVerse.org with over 20 active members.
- Accepted as a mentor org for Google Summer of Code, Google Code In and Google Season of Docs in 2019 and 2020.
- Guided and mentored **7+ international students** and contributors in the above programs.



MOSIP - MODULAR OPEN SOURCE IDENTITY PLATFORM | SOFTWARE INTERN

Mosip.io JANUARY 2019 - MAY 2019

- Global effort to develop an open source foundational ID system (like Aadhar) for governments to use.
- Worked on test rig as part of independent verification and validation.
- Developed an interactive tool to validate if a biometric device is compliant with Mosip Device Specification (MDS).

🛢 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, OpenCV 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 2102. Current ranking is 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

- Creator and Team Lead of CircuitVerse which is an online platform to create, simulate, share and learn digital circuits.
- Used internationally by several professors from over 50 universities across the world including some from University of Chicago, University of Alabama and Virginia Tech. The platform has over 100,000 projects created to date.
- As of July 2020, CircuitVerse has 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.
- Query processor supported 3 datasources and executed select queries with 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

Studied various concepts like Gossip Protocol, Membership lists, Database Sharding, Consistent Hashing, Time and Ordering in distributed systems, Paxos consensus algorithm etc. Read 4 papers on distributed systems - Cassandra, Google Big Table, Dynamo DB and Google File System.

Cassandra | Google Big Table | Dynamo DB | Google File System | Distributed Systems | Cloud Computing | Large Scale Systems