


SATVIK RAMAPRASAD









5th Year Computer Science Student at IIIT-Bangalore, Expected Graduation in 2021

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EDUCATION

- August 2016 **International Institute of Information Technology - Bangalore (IIIT-B)**
Present
➤ Integrated M.Tech. in **Computer Science**, 10th Semester, expected graduation in 2021 (5 year course)
➤ Cumulative GPA: **3.94 / 4.00** (98 %), University Topper,  [Transcript](#)

EXPERIENCE

-  **GOOGLE | SOFTWARE ENGINEERING INTERN, GOOGLE DOCS TEAM** MAY 2020 - JULY 2020
- Developed a library in Apps Script which emulates the behavior of APIs in VBA that access local file systems.
 - 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.
-  **HACKERRANK | SOFTWARE ENGINEERING INTERN**  [Hackerrank.com](#) DECEMBER 2020 - PRESENT
- Developed an **AI proctoring solution** for online assessments from scratch to work at scale.
 - Building state of the art plagiarism and cheating detection for programming assessments (ongoing).
 - Worked with several AWS services such as **EC2, S3, Rekognition, SQS, SES, API Gateway, Lambda, Cloudwatch** etc.
-  **GOOGLE SUMMER OF CODE | ORGANIZATION ADMIN**  [CircuitVerse Org](#)  [GSoC Page](#) MARCH 2019 - PRESENT
- 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, Karnataka 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 **300,000 projects** created to date.
 - As of March 2021, CircuitVerse has about **9.4 Million Page Views** and about **684K 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](#)
- **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](#)

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