sagarb-97.github.io

SAGAR BHARADWAJ KS

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EXPERIENCE

Google Summer of Code Student **Mozilla Firefox** **May 2018 - August 2018**

- Implemented a mechanism to prevent multiple downloads from bombarding the Firefox browser
- Blog : http://sagarb-97.github.io/Download-Spam-Protection-Blog/

Software Engineering Intern **Intuit India** **May 2018 - July 2018**

- Built a real time data pipeline to consume, store and analyze real time database operational metrics
- Used open source tools like Apache Kafka, Druid and RabbitMQ to build the project infrastructure from scratch

Software Engineering Intern **Samsung India, R&D** **May 2017 - July 2017**

- Unified Time Division Duplex (TDD) and Frequency Division Duplex(FDD) code bases written for Shannon chipsets and achieved 30% code size reduction using C parser scripts in Perl

EDUCATION

B. Tech **National Institute of Technology Karnataka** **2015 - Present**

- Major in Computer Science. Senior year. **CGPA : 9.39/10.00** (January 2019).
- Relevant Courses: Data Structures and Algorithms, Computer Organization and Architecture, Operating Systems, Object Oriented Programming (C++), Computer Networks, Concrete Mathematics, Database Management System, Heterogeneous parallel computing, Compiler design

Senior Secondary School **Sri Sri Ravishankar Vidya Mandir** **2013 - 2015**

Class 12 examination : 96.8 % (CBSE), School topper, Scored 99/100 in Computer Science

PUBLICATION

Automated Recognition and Processing of Handwritten Mathematical Equations, In proceedings of IEEE 4th International Conference for Convergence in Technology (**I2CT 2018**)

SELECTED PROJECTS

ALL PROJECTS ON GITHUB

- **EYantra Snakebot :** Team of 4 designed, 3D printed and programmed a snake robot for a national level robotics competition. Positioned 1st out of 200+ participating teams https://github.com/SagarB-97/EYantra-Snake-Robot
- **Handwritten Equation Solver :** An application to solve handwritten mathematical equations using deep learning algorithms. https://github.com/Handwritten-Equation-Solver/Handwritten-Equation-Solver
- **OS Simulator :** A web app that simulates various functions of an Operating System. It is built using the Django web framework and uses Python for backend calculations. https://github.com/OS-Simulator/OS-Simulator
- **ColabIt :** Prototype of a peer to peer system that acts as a trustless marketplace for buying and selling computation resources. Based on blockchain. https://github.com/SagarB-97/ColabIt
- **Parallel Programming :** Parallelized a number of algorithms including Convolution, Image Blurring, Mono color conversion etc using CUDA. https://github.com/SagarB-97/CUDAcodes
- **Low rate TCP DoS Attack :** Simulated a Low-Rate TCP DoS Attack in ns-3. Achieved by exploiting RTO in congestion control algorithm implemented in TCP Reno https://github.com/SagarB-97/Low-Rate-TCP-DoS-Attack
- **Online Quiz Platform:** Developed a platform using nodejs to automate and hasten the process of setting, attempting and evaluating tests in colleges. https://github.com/SagarB-97/Online-Quiz-Platform

ACHIEVEMENTS

- Ranked **2nd** in India and **102nd** globally in **IEEEXtreme 11.0,** a 24 hours global coding contest
- Winner of E-Yantra 2018 (Spotter snake theme), a national level robotics competition
- Ranked **2nd** in India and **214th** globally in **IEEEXtreme 10.0,** a 24 hours global coding contest
- Ranked **1515** in India in JEE Mains 2015 out of 1.3 million candidates. **Percentile Score : 99.57**

INTERESTS AND ACTIVITIES

- Open Source Enthusiast.
  - Contributed many patches to Mozilla Firefox
  - Contributing to a few repositories on **Github**. Listed as one of the official authors of SymPy, a Computer Algebra system.
- Secretary of **Web Enthusiasts Club, NITK -** Restructured recruitment procedure. Organized a week long open source talk series.
- Executive Member of **IEEE NITK -** Mentored and completed projects spanning many areas of interest for 3 years
- Computer Science projects head, **Technites** (a technical fest)**,** NITK