SAURABH VERMA

University Graduate
Computer Science and Engineering
Indian Institute of Technology Roorkee

saurrv@gmail.com
https://saurrv.github.io/
+91-8791229810

AREAS OF INTEREST

Algorithms, Artificial Intelligence, Distributed Systems, Theory, Business & Problem Solving.

PUBLICATIONS

Usage Based Tag Enhancement of Images | Pacific-Asia Conference on Knowledge Discovery and Data Mining '17
Proposed an algorithm that analyzes the usage of an image from its accompanying textual content, extracts image-relevant tags in the accompanying text and enhances the tags around the image.

EXPERIENCE

Software Engineer | **Uber Technologies, Inc.**   June 5, 2017 - Present
Contribute to the financial engineering platform responsible for bookkeeping of financial data at a scale of millions of trips per day.

Freelance Tutor | **Chegg Tutors**   April, 2017 - Present
Tutored 100+ lessons, both live and written, consisting of various projects, domains in Computer Science and multiple programming assignments.

Research Intern | **Adobe Systems**   May 9 - July 22, 2016
- Built an end-to-end pipeline in Python to enhance the tags of images for better content management.
- Improved significance, relevance and diversity of tags compared to state-of-the-art image tagging engines.

Summer Intern | **Morgan Stanley**   May 11 - July 9, 2015
Built a complete application to effectively manage the metadata, validate and trigger actions in JAVA using various frameworks such as Spring, Quartz and Apache CXF with focus on extensibility and flexibility of application.

ACADEMIC BACKGROUND

Qualification	Year	Institution	Grade
B.Tech. Computer Science	2013-17	Indian Institute of Technology Roorkee	8.982
Higher Secondary (12th)	2012-13	Bal Bharati Public School	90.8%
High School (10th)	2010-11	Bal Bharati Public School	10.0

PROJECTS

Algorithm Library   Dec 2013 - May 2017
Maintain my implementations of most commonly used Algorithms and Data Structures in Algorithmic Programming Contests. Fruit of regular participation in programming contests that test knowledge of data structures and algorithms. Solved more than **700** problems on programming websites like Codeforces, Topcoder, Hackerrank, Spoj, Codechef etc. https://github.com/saurabhvermaaaa/Algorithm-Library

Software Security   University of Maryland (Coursera)   Feb - Mar 2015

- Exploited memory errors in vulnerable C code. Carried out stack smashing, buffer overflow, format string vulnerability, stale memory usage attacks etc.
- Found web vulnerabilities in badstore.net for attacks like SQL Injection, spoofing etc.
- Found memory errors with symbolic executor KLEE and compared them with black box fuzzing tool, radamsa.

SIC Disassembler   Feb - Mar 2015

Programmed a disassembler for Simplified Instructional Computer in C++ which supported jump, arithmetic, logical, memory instructions and indexed addressing. https://github.com/saurabhvermaaaa/SIC-Disassembler

SKILLS

- **Programming Languages :** C++, Golang, JAVA and Python. Basic - Haskell and Bash.
- **Platforms & Software Packages**: Linux, MacOS, AngularJS, LaTeX, Visual Studio, Eclipse, Vim

ACHIEVEMENTS

- **ACM ICPC 2015-16**: Ranked **4**th among 1572 teams in Amritapuri regional online and **2**nd among 1112 teams in Chennai regional online contest of the International Collegiate Programming Contest (ICPC).
- **Topcoder Collegiate Contest 2016**: Ranked **2**nd in Topcoder Collegiate Contest India 2016 online round and **5**th in onsite round. It is an algorithmic programming contest open to all university students in India.
- **Amrita Summer Camp 2015** : Selected in top **25** students all over India for participating in Amrita Summer Camp 2015 held with the objective to train students in advanced algorithms and data structures required in international competitions.
- **Build The Shield 2016** : Finished **24**th in Attack Defense CTF and **25**th in Jeopardy style CTF all over the country in Build The Shield organized by **Microsoft**.
- **Kishore Vaigyanik Protsahan Yojana (KVPY) :** Got selected in the SX Stream in 2012-13 batch with **AIR 254**. It is a National Program of Fellowship in Basic Sciences, initiated and funded by the Government of India to support young talented scientists.
- **Joint Entrance Exam 2013** : Ranked **742** in JEE Advanced out of 1,400,000+ candidates. It is an entrance examination conducted for admission in various engineering courses in the top institutes of the country.
- Scored **120/120** in JEE Mains Mathematics Section.
- Bhaskar Genius Scholarship Award 2011 for ranking **3**rd in states of Madhya Pradesh and Chhattisgarh.
- Recipient of Gold Medal for academic excellence in school for standing **first** for 6+ consecutive years.

POSITIONS OF RESPONSIBILITY

- **Programming and Algorithms Group**
  - Organized and curated problems for international and intra-college programming competitions.
  - Gave lectures on data structures and algorithms.
  - https://pag.sdslabs.co/

PERSONAL DETAILS

- **Languages :** English, Hindi, French and Punjabi.
- **Hobbies :** Fitness, Football, Travelling and Writing.