

Aniket Sanghi

THIRD YEAR UNDERGRADUATE · COMPUTER SCIENCE AND ENGINEERING

Indian Institute of Technology Kanpur

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Education

Year	Degree	Institution	CGPA/%
July'17 – Present	B.Tech, CSE	Indian Institute of Technology, Kanpur	9.6/10.0
2017	AISSCE – XII	Holy Cross S.S School (KAPA), Raipur	91.6%
2015	CBSE – X	Holy Cross S.S School (KAPA), Raipur	10.0/10.0

Scholastic Achievements

2020	Academic Excellence Award , awarded for academic year 2018-2019	India
2017	All India Rank 188 , in Joint Entrance Examination (JEE) Advanced among 150,000 candidates	India
2017	All India Rank 291 , in Joint Entrance Examination (JEE) Mains among 11,00,000 candidates	India
2017	National top 1% , National Standard Examination in Physics (NSEP) & Chemistry (NSEC)	IAPT
2017	State top 1% , in National Standard Examination in Astronomy (NSEA)	IAPT
2016	All India Rank 138 , in Kishore Vaigyanik Protsahan Yojana (KVPY) among 50,000 candidates	IISC, Bangalore
2015	NTSE Scholarship Awardee , selected in top 750 students out of 8,00,000 candidates	India

Programming Achievements

2020	AIR 1 & World Rank 5 , among 26000+ participants in CodeChef April Long Challenge 2020	CodeChef
2019	Team Rank 88 , in ACM-ICPC'19 Amritapuri Regionals in 350 teams selected from 4500 teams	CodeChef
2019	Completed all 5 levels , of Google foo-bar challenge	Google
2019	All India Team Rank 31 , in Google Hash Code 2019	Google
2019	Country Rank 63 , in Round 2 of Google Code Jam 2019	Google
2018	Team Rank 179 , in ACM-ICPC'18 Amritapuri Regionals in 250 teams selected from 3000 teams	CodeChef
2020	AIR 23, Rated 6-star , among 1,80,000+ coders on CodeChef [Rating 2462]	CodeChef

Experience

Full Stack Developer Intern

Kanpur, India

SUMMER OF CODE, PROF. SANDEEP SHUKLA (WITH SUPPORT FROM NUTANIX AND UPSIDC)

Summer - 2018

- Implemented Saviour, an android application to detect accident with the help of gyroscopic, acceleration sensors in the android and Raspberry Pi (IoT) for detecting air-bag inflation in the vehicle for confirmation
- Notified the near-by hospitals (tracked via Google-Maps) and kins via a notification message/mail
- Realised a Desktop Application in JAVA to handle Derby database through user-friendly GUI
- Conceptualised Software Architecture, WebDev (PHP, JavaScript) and Database Management (SQL and Derby)

Projects

Personal Diary

IIT Kanpur

COURSE PROJECT, PROF. NISHEETH SHRIVASTAV

Jul. 2019 - Nov. 2019

- Built a MERN Application to write personal notes along with pictures to collect your memories
- Used Express.js, MongoDB with Node.js on server-side and React-native on client side
- Used mobile-native functionalities including camera, gallery, storage to click and upload pictures
- Code can be found at <https://github.com/AniketSanghi/Personal-Diary>

Building gemOS

COURSE PROJECT, PROF. DEBADATTA MISHRA

IIT Kanpur
Jul. 2019 - Nov. 2019

- Implemented file system syscalls including open(), write(), read(), pipe(), fork() etc
- Implemented multi-level paging management for syscalls like mmap(), munmap(), mprotect()
- Implemented cfork() and vfork() by properly managing the shared memory regions and policies

Machine Learning

COURSE PROJECT, PROF. PURUSHOTTAM KAR

IIT Kanpur
Jul. 2019 - Nov. 2019

- Experimented with various classification algos including SGD, Coordinate Descent, Coordinate Maximisations
- Improved accuracy of FastreXML on a given sample dataset without affecting the time and space complexity
- Implemented a CNN with linear layers to solve a given image classification problem using pytorch

Filesystem in USerspace

ACA PROJECT, PALLAV AGRAWAL

IIT Kanpur
Jan. 2018 - Apr. 2018

- Implemented a FUSE filesystem in Golang with basic read/write/edit functionality using bazil's fuse library
- Actualized an IITK Student Search purely in bash by scraping data from office automation via curl
- Code can be found at <https://github.com/AniketSanghi/CFT>

Digital Monopoly Board Game

COURSE PROJECT, PROF. INDRANIL SAHA

IIT Kanpur
Jul. 2017 - Nov. 2017

- Materialised a multiplayer Digital Monopoly board game for personal computer in Python 3.6
- Realised the GUI using pygame, tkinter libraries and back-end using object oriented programming
- Code can be found at <https://github.com/AniketSanghi/Monopoly-game>

Mini Projects

polySAT

[HTTPS://GITHUB.COM/ANIKETSANGHI/POLYSAT](https://github.com/AniketSanghi/POLYSAT)

IIT Kanpur
Oct 2018

- Implemented a SAT solver for propositional logic using the DPLL Algorithm in C++
- Experimented with various optimisations including 2-literal watch method and MOMS Algorithm

Cipher Decoder

[HTTPS://GITHUB.COM/ANIKETSANGHI/CIPHER_DECODER](https://github.com/AniketSanghi/CIPHER_DECODER)

IIT Kanpur
Mar 2019

- Actualized a decoder to decode substitutional cipher including Gold-Berg cipher in Haskell

Technical Strengths

Programming C/C++ (Proficient), Python(Proficient), Scala(Proficient), Haskell, Golang, JAVA

Web Express.js, Node.js, React-native, React, MongoDB, MySQL, PHP, Javascript

Utilities Linux shell utilities, Git, Docker, Phabricator, OSX, Arduino, \LaTeX , Vim, HDL (Verilog)

Relevant Coursework

A* Operating System
A* Computer Networks
A Computer Organisation
A Compilers

A* Comp. Lab (Bash + Haskell)
A Introduction to ML
A Data Structures & Algorithms
A Database Management

A* Logic for Computer Science
A Advanced Algorithms
A Theory of Computation
A Linear Algebra

A*: Grade for exceptional performance

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Extracurricular Activity

Mentor ALGORITHMS INDEPTH, PROGRAMMING CLUB

May. 2019 - Jul. 2019

- Taught various algorithm paradigms including Dynamic Programming, Greedy, Graph Theory, Game Theory
- Introduced various advance algorithms including KMP, Persistence, Centroid Decomposition, Huffman Coding

Secretary ASSOCIATION OF COMPUTING ACTIVITIES

Apr. 2018 - Apr. 2019

- Helped with conducting coding contests, hackathons and other events in the campus