SARTHAK SINGHAL

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WORK EXPERIENCE

Software Engineer
Aided

📅 May 2019 – September 2019   📍 Hyderabad

As a software engineer my role was to setup and manage the website, web-application and database for the company. Also designed automated reports based on the given tests. *[Django, Bootstrap, SQL]*

Trainee
Five Finger Solutions

📅 August 2018 – December 2018   📍 Hyderabad

Worked on a computer vision team project in which my job was to search upon the various feature detection methods and select the most suitable among them. *[Python, OpenCV]*

MAJOR PROJECTS

Linux shell

Bash like shell for linux, with support for piping and redirection, written using system calls. *[C]*

Scalable Web Cache

Built a miniature scalable web cache for distributed setting which handles simultaneous requests from multiple clients. *[Python]*

SQL engine

Built a mini sql engine which runs a subset of SQL queries using command line interface. *[Python]*

Water Availability

Estimated water availability by calculating surface run off for Krishna river basin in India. *[Qgis, Python, Matlab]*

AI bot

Developed an AI bot which plays ultimate tic tac toe (a version of tic tac toe) using various game techniques. *[Python]*

Library Portal

Created a library portal which includes all basic functionalities of an online library system. *[SQL, Flask, Jinja templates]*

Signal Processing

Worked on several signal processing problems such as decoding telephone numbers, converting sound to images, reordering of audio chunks, reconstruction of images using PCA, slide automation using SIFT etc. *[Python, Matlab]*

Game Designing

Created several games like Hangman, Tic-Tac-Toe, Space Invaders, Super Mario, Jetpack Joyride, Plane Shooter, City Surf. *[Python, Javascript, C++, Opengl, Webgl]*

Trend Analysis

Computed spatial and temporal trend in Indian climate using hydrological data. *[Python]*

EDUCATION

International Institute of Information Technology
Hyderabad

📅 August 2017 – Present   CGPA:8.81

- B.Tech. in Computer Science
- Teaching Assistant for Psychology course

SKILLS

C   C++   Python   Javascript   Matlab
Bash   MySQL   Django   Flask   HTML5
CSS   Bootstrap   OpenGL   WebGL
numpy   Git   Linux   Google office suit

COURSEWORK

- Foundation: Computer Programming, Data Structures, Algorithms, Software Analysis, IT
- Systems: Computer Systems, Operating Systems, Database Systems, Engineering Systems, Distributed Systems
- Field Specific: Graphics, Artificial intelligence, Machine Learning, Information Security, Signal Processing, Automata Theory, Data Mining, Social Perspective on HCI, Computer Networks
- Others: Digital Logic, Electrical Science, Basic Electronics, Hydroinformatics

ACHIEVEMENTS

- Secured IIT JEE (mains) rank 990 among 1.2 million people
- Secured IIT JEE (advanced) rank 1953 among .15 million short listed people
- Secured 395/450 in BITSAT
- One out of 1523 fellows selected for the prestigious KVPY scholarship (2016-2017) by IISC and DoST, Government of India
- Perfect 10 grade in spring 2020 semester

VOLUNTARY WORK

- Open source contributor at Codeuino and TheAlgorithms.
- Class representative.
- Member of college mess committee.