# Sarthak Singhal

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# **EDUCATION**

## **IIIT HYDERABAD**

B.Tech in Computer Science August 2017 - May 2021 (expected) CGPA: 8.81/10.0

# SKILLS

#### Proficient:

 $\bullet$  C  $\bullet$  C++  $\bullet$  Python  $\bullet$  Bash  $\bullet$  SQL  $\bullet$  CSS  $\bullet$  HTML 5

#### Familiar:

• Javascript • Matlab • Django • Flask • Bootstrap • Numpy • Git • Linux

# **POSITIONS**

- Teaching Assistant: Manage class of about 250 students for Psychology course.
- Class Representative: Act as a mediator between students and faculty.
- Open source contributor at Codeuino and The Algorithms.
- Team Leader: Served as project head for several projects done throughout college.

# RELEVANT COURSES

• Computer Programming • Data Structures • Software Analysis • Engineering Systems • Operating Systems • Database Systems • Distributed Systems • Computer Graphics • Artificial Intelligence

• SMAI • Machine Learning • Information Security • Data Mining • Hydrological Modelling • Complexity Theory

# **ACHIEVEMENTS**

- •One out of **1523** fellows selected for the prestigious **KVPY scholarship** (2016-2017) by IISC and DoST, Government of India
- Secured IIT JEE (mains) rank **990** among 1.2 million people
- Secured IIT JEE (advanced) rank **1953** among .15 million short listed people

# **CODING PROFILE**

- Codeforces max rating 1549
- Secured **864th** global rank among 8K people in Google kick start round G 2020
- Secured **1901st** global rank in Round 1 of Facebook Hacker Cup 2020
- Secured **986th** global rank among 50K people in Codeagon 2020

# WORK EXPERIENCE

## **SOFTWARE TRAINEE ONEPLUS**

Hyderabad | Revoked due to virus outbreak

## **SOFTWARE DEVELOPER MYHEALTHBUDDY**

June 2020 - August 2020 | WFH

- Increased productivity by automating the manual task of entering customer sale details into the database by creating dynamic forms.
- Worked on role based dashboard and added functionalities specific to the role.

# **SOFTWARE ENGINEER AIDED**

May 2019 - September 2019 | Hyderabad

- Setup and manage the website, web-application and database for the company.
- Designed dynamic test reports based on the entered data.

#### **RESEARCH ASSISTANT** LAB FOR SPATIAL INFORMATICS

January 2020 - Present | Hyderabad

• Analysed variation of water and energy zones of India at different temporal and spatial scales based on rainfall and temperature.

#### **TRAINEE** FIVE FINGER SOLUTIONS

August 2018 - December 2018 | Hyderabad

• Worked on a computer vision team project to learn about software development process.

# SELECTED PROJECTS

# LINUX SHELL OPERATING SYSTEMS | C

• Implemented a bash like shell for Linux with support for piping, redirection and several other commands, written using system calls.

## **SCALABLE WEB CACHE** DISTRIBUTED SYSTEMS | PYTHON

• Built a miniature scalable web cache for distributed setting which handles simultaneous requests from multiple clients.

#### **SQL ENGINE** DATABASE SYSTEMS | PYTHON

• Built a mini sql engine which runs a subset of sql queries using command line interface.

# AI BOT ARTIFICIAL INTELLIGENCE | PYTHON

• Implemented an AI bot using Minimax algorithm and Alpha-Beta pruning which plays ultimate tic tac toe (modified version of tic tac toe).

## FACE CLASSIFICATION Machine Learning | Python

• Performed classification on face images and compared the results by applying different feature transformations and models.

# MARKET-BASKET ANALYSIS DATA MINING | PYTHON

• Extract associations among items bought by customers by applying apriori algorithm on transaction data.

## GAME DESIGNING GAME DEVELOPMENT | C++, OPENGL

• Built 2D arcade game and 3D flight simulator game with support for multiple camera views for enhanced gameplay.