

RISHABH SINGHAL

Pre-Final year undergraduate student at IIIT Hyderabad

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EXPERIENCE

Undergraduate Researcher

Cognitive Science Lab, IIIT Hyderabad

May 2019 – Ongoing Hyderabad, India

- Working in the field of cognitive science with special focus on virtual reality and psychological disorders.
- Co-authored a paper "Head-Movement Analysis of Affective 360 degree Scene Exploration" which is currently in review process (ACM VRST '20).

Software Engineering Intern

Carengrow

August 2018 – November 2018 Hyderabad, India

- Designed and developed a web application in **React** for identifying and inculcating behaviour changes in a person, or a group using timely reminder.
- Studied and implemented COMB theory as a framework for identifying behaviour.

Organiser and Web Developer

Internet Health Hackathon 2019

July 2019 – September 2019 Hyderabad, India

- Lead a team of 50+ volunteers and managed the logistics of the event.
- Developed the **website** for the event using Bootstrap, HTML and CSS.

Teaching Assistant, IIIT Hyderabad

August 2019 – November 2020 Hyderabad, India

- Algorithms and Operating Systems
- Probability and Statistics & Introduction to Information Security

PROJECTS

Extreme Tic-Tac-Toe : AI-Bot

Spring 2019

- A bot that plays a modified version of Tic-Tac-Toe implemented using **alpha-beta pruning**, **zobrist hashing** and **custom heuristics**.

Linux Shell: Mini Terminal

Monsoon 2018

- Bash like shell for Linux, with support for piping and redirection, written in C using system calls.

MUSee: Music Streaming Web App

Spring 2018

- Music streaming application similar to **Spotify** with features like playlist (public and private), search bar and authentication.
- Implemented using **Flask** as framework and **MySQL** as RDBMS.

Arcade Games in OpenGL

Spring 2019

- An immersive 3-D implementation of iconic From The Seas which supports multiple viewpoints.
- Implementations of Jetpack Joyride and Subway Surfer.

Slide Matcher

Spring 2019

- Match frames from a video lecture with actual presentation slide deck using SIFT based feature matching.

Blockchain based Battleship

Monsoon 2019

- An implementation of **Battleship** backed with Blockchain using **solidity** for smart contracts.
- Implemented multiplayer functionality using **Sockets**, with **React** for front-end and **Django** as a framework.

EDUCATION

B.TECH + MS (BY RESEARCH) IN COMPUTER SCIENCE

IIIT Hyderabad

Expected Graduation: 2022

Cumulative GPA (Current): 9.32/10.0

ACHIEVEMENTS

- Dean's List Awardee** (three times) for Academic Excellence: Top 5% of the batch
- Kishore Vaigyanik Protsahan Yojana** scholar since 2015
- JEE** got rank of 1551 among 1.2 million aspirants

Competitive Programming

- Facebook Hacker Cup** (Qualification Round 2020) ranked **199/32,000**
- Google Hash Code** (Qualification Round 2020) ranked 2194.
- Google Code Jam** qualified for Round 1 in 2018 & 2020.
- Codeforces**
Rating : **2058 [Candidate Master]**
Ranked 81 among 15k participants in Div2 Round 658
- Codechef** - Rating : **2114 [5 Stars]**

SKILLS

- Programming Languages:** C, C++, Python
- Web Frameworks:** React, Flask, NodeJs
- Miscellaneous:** Latex, Matlab, SQL, OpenGL, Bash, Erlang, Git, Linux

COURSEWORK

- CS** - Computer Programming, Data Structures and Algorithms, Blockchain, Operating Systems, Computer Networks, Data Systems, Graphics, Distributed Systems, Information Security
- ML** - Artificial Intelligence, Statistical Methods in AI
- Maths** - Linear Algebra, Number Theory, Automata Theory, Functional Analysis

EXTRACURRICULAR

- Technical Blogger - **RishBlogs**
- Member of Mozilla Telangana Group