

Animesh Sinha

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EDUCATION

IIIT HYDERABAD

BTECH (HONS.) IN CSE AND MS IN
COMPUTATIONAL NATURAL SCIENCES
July 2018 - Current; **CGPA 9.51**

Deans List (2x) and Merit List (2x)

Elective Courses: Distributed Systems,
Optimization Methods, Statistical Methods in AI

DELHI PUBLIC SCHOOL

Grad. 2018 | Std. 12 CBSE (91.8%)
SAT: 1510/1600, TOEFL: 116/120, Sat
Subjects: 800/800 (Physics, Math-2), AP: 5/5
(Physics-C1, Physics-C2, Computers-A)

COMPETITIVE CODING

ACM-ICPC Regionals 2019 Amritapuri

- **Onsite Rank 31** in the onsite competition (out of 310 teams across India)

Google Coding Competitions

- **Kickstart: Ranked 204 in Round C 2021** and Round A-E 2020: 638, 584, 326, 269, **137** (out of 10k+ participants).
- **CodeJam: Ranked 2443** in Round 2, 2019.
- **HashCode: Ranked 710** (in 2020) and 796 (in 2019) among 11k participants

Facebook HackerCup

- **Ranked 1307** in Round 2 of 2020 (out of $\approx 33k$ total)
- **Ranked 1093** in Round 1 of 2019

CodeForces ([AnimeshSinha1309](#)) rating **2101**
(Master, India Rank ≈ 150)

CodeChef ([animesh1309](#)) rating **2185** (5 star)

ACTIVITIES

Hacking Club Coordinator, 2019 - organized and set problems for a college CTF

Theory Club Coordinator, 2019

Chess (Best Player 1st board - CBSE Zonals)

Vodafone Derek O'Brian Quiz - India Top 6

[Stack Overflow](#) member (585 points)

SKILLS

Languages: C++, Python, Java, Dart, Assembly

Web: TypeScript, React, Angular, Vue, Bootstrap, Django, Express JS

Deep Learning & Quantum: PyTorch, Tensorflow, Qiskit, Cirq, TF Probability

Misc: MySQL, Firebase, MongoDB, JetBrains, Blender, Git, Amazon Web Services

EXPERIENCE

AICROWD | RESEARCH INTERN

October 2020 - December 2020

Working on the AICrowd food segmentation challenge, pixel level segmentation for a long-tailed high-error dataset, used **Facebook Detectron2**, **PyTorch**.

VIRTUAL LABS, MHRD | WEB DEVELOPMENT INTERN

May 2019 - June 2019

Developed JavaScript simulations visualizing data structure, and developed associated learning material and quizzes for Tries and Suffix Tries, Heaps, Red-Black Trees, and 2-3 Trees.

INDIAN LINGUISTICS OLYMPAD | WEB DEVELOPER

December 2018 - May 2019

Sole web developer for the Indian Linguistic Olympiad, developed website in **Vue.js** with over **7600 users** in a year.

IIIT HYDERABAD | TEACHING ASSISTANT

Spring 2020-Current

Module Coordinator for Foundations of Modern Machine Learning course, developing content as Jupyter Notebooks (Colab). **Teaching Assistant** for Probability and Statistics, Data Structure and Algorithms.

PROJECTS

Flutter App (Android, iOS and Web) and **Django Website** for managing a library with AI based automated book tagging (**BERT + Tensorflow**).

Personal Website with a Model Filtering simulation **mini-game to show AI ideas**, in **Angular**, with **Firebase** integration and Google **OAuth**. ([Deployed here.](#))

YouTube Watch Party Chrome and Firefox extension to enable many users to watch videos together using **WebRTC** with token passing based sync.

Bulk-purchase shopping website in **React** and **MongoDB**, **ExpressJS** (MERN stack) with UI endpoints for seller and buyers.

Syscalls, User Processes & Process Schedulers for **xv6 Operating System** and an **Interactive Shell** with piping, redirection, and bash commands, in **C**.

Full Object Oriented refactor of **Java bowling management system** made with **Swing API**, maximizing **code metrics**

ATmega - **microcontroller device interface libraries** written from scratch in **C++** used to implement **Fall detection sensor for elderly** in C++.

Open Source contributions to **Sympy** (5 merged PRs), **Processing**, **Cirq**, etc.

ACHIEVEMENTS

- 2020 Winner **Smart India Hackathon**, for smart library management system
- 2020 3rd rank and Community Award in AI Blitz #3 on **AICrowd**
- 2019 **Megathon PwC**, **First position** for proposing smart drainage systems.
- 2019 **Ranked 204** in a global entry-level Cyber-Security contest (PicoCTF).
- 2018 Part of Indian Astronomy Olympiad Camp (**InAaO**); **top 30** pan-India
- 2020 One of 330 finalists in **ASEAN Hackathon** for **Blockchain in logistics**
- 2021 Completed **Workera.ai** Deep Learning engineer Certification

PUBLICATIONS

- [1] **Animesh Sinha**, Utkarsh Azad, Dr. Harjinder Singh. **Qubit routing using Graph Neural Network aided Monte Carlo Tree Search**. Arxiv, 2021.

Working as an undergraduate researcher at **Center for Computational Natural Sciences and Bioinformatics** at IIIT, in the supervision of [Prof. Harjinder Singh](#) on Machine Learning applied to algorithms on Near-term Quantum Devices.