

# Monosij Roy

Student of Computer Science at IIIT Hyderabad

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## Contact

A-1503,  
Nagarjuna  
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Phase,  
Bangalore-  
560078

## Key Skills

C  
C++  
Python  
Java-script  
SQL  
Flask  
CSS  
HTML

## Summary

*I am a National Talent Search Scholar and a freshman in IIIT-Hyderabad, one of the finest colleges for computer science education. I am currently pursuing my BTech in computer science and MS by research. I had qualified for Mathematics and Informatics Olympiad in the past. I am also a Fide-rated chess player and a specialist in Codeforces. I am interested in working on projects related to Artificial Intelligence that leverages my mathematics and python programming skills*

## Education

July-2023 to June-2028

JULY 2023 -JUNE 2027

**B-TECH in Computer Science, IIIT Hyderabad** | July 2023 – June 2027

JULY 2027- JUNE 2028

**MS By Research in Computer Science, IIIT Hyderabad** | August 2027- July 2028

## Courses taken so far

- Discrete Mathematics
- Real Analysis
- Computer Programming WITH C
- Digital Systems with Microcontrollers
- Linear Algebra
- Data structures and algorithm
- Computer Science Organization
- Introduction to Software-systems
- Probability & Statistics
- Algorithmic thinking
- Operating Systems and Networks
- Data and Applications

## Achievements

- National Talent Search Scholarship – 2021
- KVPY 2022 Rank-holder
- IIT JEE-2023 Top 0.5 Percentile
- ISI Admission Test: RANK-68
- UGEE Admission Test: RANK-26
- Qualified for Indian National Mathematics Olympiad (2019,2021,2022)[Stage-2 of the International Mathematical Olympiad]
- Qualified for Indian National Olympiad in Informatics (2023)[Stage -2 of the International Olympiad in Informatics]

## Projects

### Photo-Slideshow Web Application with Image Upload and Video Creation (May-2024)

Developed a Photo-slideshow web application leveraging HTML, CSS, JavaScript, Python, SQL, and Flask. The app facilitates users to upload a series of images, which are then converted into a cohesive video. Utilizing these technologies to craft an intuitive and user-friendly interface for seamless image upload, customization, and video creation.

### OS Enhancements: System Call Monitoring, Scheduling, and Interrupt Handling (Oct-2024)

Developed syscall tracking (getSysCount) and a periodic interrupt handler (sigalarm). Implemented lottery-based scheduling with a settickets() syscall for proportional CPU allocation and arrival-based prioritization. Designed a preemptive MLFQ scheduler with dynamic priority adjustments and starvation prevention.

<https://github.com/OSN-Monsoon-2024/mini-project-2-Leningrad-Sniper>

## Certifications

Introduction to game theory- Stanford Online

Mathematics for Machine Learning-Imperial College London

Basics of Quantum Information-IBM

## Extracurricular

- Secured 1st Place in State chess championship in the under 12 category-2018
- Secured 1st Place in state championship in under 1400 category-2019
- Secured 9th Place in under-9 category in State chess championship
- Member: IIT Chess Club
- Member of my college chess team which finished second runner-up at the Indian Collegiate Chess Championship(Fall-2024) organized by chess.com