



SANSKAR RANJAN



Roll No: 2021096
DOB: February 12, 2004
Git: [just-a-penguin](#)

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Education

Indraprastha Institute of Information Technology

B.Tech(CSE)
2021 – 2025(Present)

CGPA: 7.4
(till 4th Semester)

School of Creative Learning, Patna

CBSE
2019 – 2020

Percentage: 91.6%

Radiant International School, Patna

CBSE
2018 – 2019

Percentage: 93.3%

Skills

Expertise Area	Object Oriented Programming, Data Structures & Algorithm, Competitive Programming
Programming Language	Python, C/C++, Java, HTML, R, SQL, Dart(Learning), Flutter(Learning)
Tools and Technologies	GIT, Bash, Numpy, Google Colab, Android Studio, LaTeX, Canva, Jupyter Notebook, Figma
Technical Electives	Introduction to programming, Advanced Programming, Computer Organisation, Operating System, Data structure and Algorithms, Discrete Mathematics

Projects

Hypothesis Testing for Gene Data:

Guide: Dr. Tavpritesh Sethi, IIITD

Tech Stack: R, NCBI library

I worked in a project where we analyzed gene data to find differentially expressed genes in autoimmune diseases and normal people to test if Vitamin D has a positive effect on expression on genes which might reduce chances of auto-immune diseases.

Menace:

Guide: Self

Tech Stack: Python, Random module

A coded model of the mechanical computer made from 304 matchboxes designed and built by artificial intelligence researcher Donald Michie in 1961. It is based on simple python data structures and uses dictionaries to represent matchboxes. It uses the method of reward and punishment to form a pseudo neural network that trains itself when playing vs humans or other bots.

Dawki:

Guide: Dr. Vikram Goyal, IIITD

Tech Stack: my-SQL, Python

A model my-SQL database for an online retail store. In this project, I created a command line interface using Python to interact with the MySQL database, allowing users to perform various operations such as adding customers, managing products, and placing orders.

Tank Stars:

Guide: Dr. Raghava Muthuraja, IIITD

Tech Stack: Java, LibGDX

I designed and developed a multiplayer 1v1 tank battle game using Java and LibGDX. I created UML diagrams to visualize the game's structure and interactions.

RISC Simulator and Assembler:

Guide: Dr. Sujay Deb, IIITD

Tech Stack: Python

I developed a custom assembler and simulator for a Linux-based shell, specifically designed to support a custom Instruction Set Architecture (ISA).

SlappyBird:

Guide: Self

Tech Stack: Java, Android Software Development Kit (SDK)

A work in progress android game which is a modified-version of the famous game flappy bird , with some added twists.

Hangman:

Guide: Dr. Pankaj Jalote, IIITD

Tech Stack: Python , Turtle

I created a Python hangman game utilizing simple Python scripts and the Turtle module. The game involved implementing the classic hangman mechanics, including word selection, guessing, and updating the display based on correct and incorrect guesses.

Research

Coreset construction of moving points:

(May 2023 - Present)

Guide: Dr Supratim Shit

In this project we are working on construction of coresets when the data points in context are dynamic. These coresets enable the efficient processing and analysis of continuously evolving data streams.

Positions of Responsibility

- Part of events OT organizing the Odyssey cultural fest (Jan 2023)
- Part of the organizing team organizing a valorant event. (May 2023)
- Member of the prefectorial board in class 10th in school. (Jan 2018 - Jan 2019)

Awards and Achievements

- Leetcode rating of 1482
- Codeforces rating of 1178
- Top 1% in state in IOQP(Physics Olympiad organized by IAPT)
- Qualified to the second stage of Physics and Astronomy Olympiads organized by IAPT
- NTSE Stage 1 and PRMO qualified (Class 10th and 11th).

Interests and Hobbies

Chess enthusiast and member of IIITD chess club with a 1645 blitz rating on [Lichess](#). I Enjoy **reading** novels. Also enjoy **swimming** and **photography walks**.

Declaration: The above information is correct to the best of my knowledge.

Name: Sanskar Ranjan

Date: July 10, 2023