

Anshik Sahu

☎ (+91) 7887068325 | ✉ anshik07.iitd@gmail.com | 📷 AnshikSahu | 🔗 anshik-sahu-0893a822b

“Be the change that you want to see in the world.”

About Me

I am a motivated and enthusiastic individual with a strong interest in software engineering and machine learning, fascinated by how these can be employed to solve real-world problems. At present, I am in my second year of studying for a bachelor's degree in Computer Science and Engineering at the Indian Institute of Technology, Delhi.

Education

Indian Institute of Technology, Delhi

B.TECH IN COMPUTER SCIENCE AND ENGINEERING

Nov 2021 - Current

CGPA: 8.55

Mahatma Hansraj Modern School

JUNIOR COLLEGE (CLASS 11TH AND 12TH CBSE BOARD)

2019 - 2021

Marks: 95.6%

Christ The King College

HIGH SCHOOL (CLASS 9TH AND 10TH ICSE BOARD)

2017 - 2019

Marks: 93.4%

Scholastic Achievements

Top 7%, IITD Merit Award, Semester 1

2021-2022

All India Rank 698, among 140000 students, Joint Entrance Exam Advanced

2021

99.83 Percentile, among 1 million students, Joint Entrance Exam Mains

2021

Scholar, among 1 million students, National Talent Search Examination

2018-2019

All India Rank 364, among 50000 students, KVPY (SX stream)

2020

State Topper, IOQC (XII Level)

2020-2021

Projects

Temperature Predictor for 3D HBM

Prof. Preeti Ranjan Panda

SURA 2023

*Ongoing

- Working on a machine learning based temperature predictor for 3D memory to enable efficient DTM and task mapping
- Implementing deep learning to achieve high accuracy with manageable overhead
- Technical Skills:** Languages: Python, C/C++, Bash, Simulators: Hotspot, Sniper, McPAT, CoMeT, Operating Systems, Computer Architecture, Machine Learning, Algorithms

Movie recommendation website

Prof. Abhilash Jindal

- The website might not be accessible due to server restrictions. The documentation and code can be accessed [here](#)
- Created a recommendation website using HTML/CSS and Flask
- Implemented a machine learning algorithm for recommendations and penalisation
- Technical Skills:** Python, Flask, MySQL, HTML, CSS, API, Machine learning, Pandas

Cache Simulator

Prof. Rijurekha Sen

- Created a n-leveled cache hierarchy simulator to simulate 2 level cache structures with varying parameters
- Used these results to compare and analyse various trends in the effectiveness and miss rate of the hierarchy with changes in sizes and associativity of caches
- Technical Skills:** C++, Caches, Computer Architecture, Simulators

Markdown to HTML parser

Prof. S. Arun Kumar

- Implemented a LL1 parser in SML to convert markdown to HTML for building basic websites.
- This included lists (ordered and un ordered), tables, tags, headings, indentation, etc
- Technical Skills:** SML, parsers, HTML

VHDL Stopwatch

Prof. Preeti Ranjan Panda

- Designing a component to display 4 hexadecimal numbers on a seven segment display
- Designing a component to keep track of time
- Adding control switches to start, pause, continue and reset the stopwatch
- Technical Skills:** VHDL, Circuit Analysis and Design

Implementing the search nearby feature of Google maps

Prof. Ashish Chiplukar

- Creating a static data structure for a set of given points in a 2-dimensional plane with a tree structure to support faster query computation
- Creating an algorithm which returns a list of points within a given distance of a point
- Analysing the time and space complexity of the algorithm and optimising for faster query processing
- **Technical Skills:** Python, Algorithmic Analysis, Data Structures

Python Interpreter

Prof. Sanjiva Prasad

- Creating an algorithm to convert a code into a list of executable commands
- Creating an algorithm to interpret and execute custom commands through python
- Using python list analogous to computer memory to mimic execution of machine language instructions
- **Technical Skills:** Python, Interpreter and Compiler

Reddit Video bot

Individual Project

- Cloned a repository from Github which takes posts from reddit and uses text to speech to create a video and modified it
- Used shell scripting to automate the video creation and editing in large numbers
- **Technical Skills:** Python, moviepy, Shell scripting, API, Github

Relevant Courses

Indian Institute of Technology, Delhi

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| • COL106: DATA STRUCTURES AND ALGORITHMS | • COL215: DIGITAL LOGIC AND CIRCUIT DESIGN |
| • COL202: DISCRETE MATHEMATICAL STRUCTURES | • COL100: INTRODUCTION TO COMPUTER SCIENCE |
| • MTL106: PROBABILITY AND STOCHASTIC PROCESS | • MTL101: CALCULUS |
| • MTL100: LINEAR ALGEBRA AND DIFFERENTIAL EQUATIONS | • ELL101: INTRODUCTION TO ELECTRICAL ENGINEERING |
| • COL216: COMPUTER ARCHITECTURE | • COP290: DESIGN PRACTICES |
| • MTL102: DIFFERENTIAL EQUATIONS | • ELL205: SIGNALS AND SYSTEMS |

Skills

Programming: , Python , C/C++, Java, HTML, CSS, JavaScript, VHDL, SML, Prolog, Assembly

Miscellaneous: , Shell (Bash/Zsh), LaTeX (Overleaf), Microsoft Office, Git, AutoCad

Extracurricular Activities

Adventure Club

IIT Delhi

EVENT MANAGER AND PUBLICITY REPRESENTATIVE

VIDYA Teaching Project

National Service Scheme

VOLUNTEER

Academic Mentorship

IIT Delhi

APL100: APPLIED MECHANICS