Anuj
Junior Undergraduate
Computer Science and Engineering Department

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ACADEMIC QUALIFICATIONS

Year	Degree/Certificate	Institute	CPI/%
2021 - Present	Bachelors in Technology	Indian Institute of Technology Kanpur	9.04/10
2021	CBSE(XII)	DAV Centenary Public School, Jind	96.6%
2019	CBSE(X)	DAV Centenary Public School, Jind	95.4%

SCHOLASTIC ACHIEVEMENTS

- Secured **All India Rank 195** in **JEE Advanced 2021** among the **140,000** shortlisted candidates
- Secured **All India Rank 1254** in **JEE Mains 2021** among **1.2 million** candidates

EXPERIENCE

Summer Intern | Mentor - Prof. Shivam Tripathi, IIT Kanpur   *May'23-Jul'23*

- Developed a dashboard utilizing **Flask** framework to monitor and analyze real-time data from **15+** diverse field devices
- Performed data analysis techniques like **outlier detection** and **curve smoothing** to eliminate anomalies in the data
- Utilized **PostgreSQL** to store and manage data, incorporating python **OOP** concepts to encapsulate database interaction
- Leveraged **Highcharts JS** library to create interactive charts and **Bootstrap5** for an intuitive and responsive **UI** interface

PROGRAMMING AND OTHER ACHIEVEMENTS

- Max Rating of **1706 (Expert)** on Codeforces (AnujS) and **1899 (4 Star)** on Codechef (anujs_04)
- Global **rank 4** in Codechef Septemer Long 2022 and global **rank 24** in Codechef Starters 97 Division 2 contest
- Participated in **Microsoft Cybersecurity Engage 2022** and learnt fundamentals of **cryptology** and **encryption**
- Participated in **India Terminal 2023** organized by **Citadel** and featuring over 30,000 engineers and data scientists

KEY PROJECTS

Health++ ⌘ | CS253 Course Project | **Mentor** - Prof. Indranil Saha, IIT Kanpur   *Jan'23-May'23*

- Led a team of 10 students to develop a platform that brings services provided by IIT Kanpur's Health Center online
- Used **Django** framework for backend development and created the UI of the website using **HTML, CSS and JS**
- Executed an end-to-end software development process from ideation to implementation and rigorous testing

CSE-BUBBLE Processor | CS220 Course Project | **Mentor** - Prof. Urbi Chatterjee, IIT Kanpur   *Apr'23-May'23*

- Developed a 32-bit processor with **Verilog** to create an instruction set architecture closely resembling **MIPS-32 ISA**
- Engineered an **FSM** to manage control signal execution, resulting in a seamless single-cycle instruction execution unit
- Implemented the **bubble sort algorithm** in MIPS assembly language and translated it into the designed instruction set
- Simulated the execution of the algorithm on a list of integers on the designed processor using **Xilinx ISE 14.7**

Clash of Code | Project Mentor, ACA, IIT Kanpur   *May'23-Jul'23*

- Guided a group of **20+** aspiring programmers in a project focused on improving **competitive programming** skills
- Organized weekly coding sessions and conducted interactive discussions to foster a collaborative learning experience
- Discussed popular **algorithms** in topics like **Number Theory**, **Graphs** and **Trees** with their implementation in **C++**

Intro To CP | Association for Computing Activities (ACA) Project, IIT Kanpur   *May'22-Aug'22*

- Revised the syntax of **C++** and learned how to analyze the time complexity of algorithms using **Big-O** notation
- Studied the **data structures** provided by **C++ Standard Template Library**, including **vectors, maps, stacks**
- Participated in competitive programming competitions hosted on platforms such as **Codeforces** and **CodeChef**

Under The Hood ⌘ | Programming Club, IIT Kanpur   *Apr'22-Jul'22*

- Explored the intricate mechanics behind arithmetic operations and fundamental principles driving computer functionality
- Acquired proficiency in **Verilog** syntax and gained a strong foundation in **Hardware Description Language**
- Employed the **qtSPIM** tool to analyze and execute **MIPS Assembly language** programs
- Culminated learning experience by creating a **Tic-Tac-Toe** game from scratch using the MIPS assembly language

TECHNICAL SKILLS

- **Proficient:** Python, C, C++, JavaScript, Git, Bash, SQL, HTML, CSS, LaTeX
- **Beginner:** NodeJS, Bootstrap, AutoCAD, Verilog HDL, Assembly Language
- **Libraries and Frameworks:** Flask, Django, NumPy, Pandas, MatPlotLib, Tensorflow

RELEVANT COURSES   (A* - Exceptional Performance)

Data Structures and Algorithms **A***	Fundamentals of Computing **A***
Software Development and Operations **A***	Discrete Mathematics
Logic in Computer Science **A***	Probability for Computer Science
Computer Organisation	Linear Algebra
Machine Learning Specialization - Deeplearning.ai, Coursera	Algorithmic Toolbox - UCSD, Coursera

POSITION OF RESPONSIBILITY

Academic Mentor | Counselling Service, IIT Kanpur   *Aug'22-Jul'23*

- Helped acclimatize the juniors to the academic environment at IIT Kanpur and guided them with their coursework
- Conducted AM sessions to help solve students' academic doubts in their **C** programming course ESC101
- Conducted **doubt clearing sessions** and provided one-to-one mentorship to a group of **30** freshman students