

# Sankalp Sharma

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## EDUCATION

B. Tech Computer Science Engineering	2026	Vellore Institute of Technology, Vellore	8.94 CGPA
ISC (Class XII)	2022	City Montessori School, Station Road, Lucknow	98 %
ICSE (Class X)	2020	City Montessori School, Station Road, Lucknow	96 %

## SELF LEARNING PROJECTS

### Travel Journal | React.js, CSS

- Developed an **interactive application** for users to document their travel experiences by **uploading photos** and **writing descriptions**. This project allows users to create and manage a personal travel journal, enhancing their ability to **track and share** their adventures.
- The application leverages **React's state management** to handle the **dynamic addition** of travel experiences. This enables users to seamlessly add new entries, update existing ones, and view their travel documentation in real time. The use of the React state ensures a **responsive** and **intuitive** user experience, facilitating easy interaction with the application.

### Meme Generator | React.js, CSS

- Created using **React.js**, this application allows users to **generate custom memes** by overlaying text on randomly **fetched images**. The **useEffect** hook is utilized to fetch meme images from an **external API**, providing a dynamic selection of images for **users to customize**.
- The project employs **Git for version control**, ensuring systematic **tracking of changes** and collaborative development. It has been deployed on **GitHub Pages**, making the application readily accessible to users online.

### To-Do List Application | React.js, Node.js, Express.js, MongoDB

- The **To-Do List MERN Project** is a full-stack task management application designed to organize and manage daily tasks efficiently. The application's frontend is built using **React.js**, where **React Router DOM** is utilized to create seamless navigation between different pages, such as the task list view, and task creation.
- The backend is powered by **Node.js** and **Express.js**, with **MongoDB** serving as the **database** for persistent data storage. The backend handles task-related operations like creating, updating, and deleting tasks, ensuring secure and **efficient data management**. This project exemplifies the integration of **modern web development** technologies to deliver a responsive and user-friendly application.

### Authentication System | Node.js, Express.js, Tailwind, MongoDB

- Created a **secure authentication** system with **Node.js**, implementing **robust** login and registration processes. This **includes password hashing** using **bcrypt** for secure storage and verification, and **session management** to maintain user sessions across requests. The system emphasizes the secure handling of user credentials and ensures a **reliable** authentication process.
- Leveraged **Express.js** to manage server-side operations, including the creation and management of protected user routes. The system uses **Express.js modules** to establish a connection with the backend, **facilitating secure** communication and route protection.

## ACADEMIC PROJECTS

### TDS Monitor using Arduino Nano

- Developed a **Water Quality Check System** using **Arduino Nano** to monitor **Total Dissolved Solids (TDS)** and **temperature** of water samples.
- This project involved integrating sensors to measure water quality parameters, coding the Arduino for **data collection** and processing, and displaying the results on an LCD screen. The system provides a **reliable and cost-effective solution** for real-time water quality monitoring.

### Hydraulic Arm

- Designed and built a **hydraulic arm** for a science exhibition, demonstrating an efficient method for **lifting heavy objects**.
- It showcased the potential for this technology to be upgraded into a **bionic arm**, highlighting its **adaptability** and **innovative** design.

## EXTRACURRICULAR ACTIVITIES

### Executive General Secretary | The Institution of Engineering and Technology Chapter at VIT

Jan 2023 - Present

- Lead Organizer** during **Sociovate**, a hackathon addressing **social issues**, which had over **300 participants** from across the campus, lead a development team to **develop** and **debug** the registration website for team submissions.
- Hosted** two **workshops**, **Query Quest** for teaching **SQL queries** and **Fly with Flutter** for basic app development.
- Collaborated** with the **Technical Leads** to organize a **Project Cycle** for IET-VIT Chapter members to work on various projects aimed at helping college students in their campus life and helping college administration with various tasks.

### Core Committee Member | The Institution of Engineering and Technology Chapter at VIT

Dec 2022 – Jan 2023

- Member of the organizing committee during **Social Transformers**, a flagship event of IET-VIT, ensuring smooth operation and resolving technical difficulties for participants. Managed a crowd of more than **250 participants** and helped them with their technical difficulties.
- Lead Organiser and host for two workshops having external speakers on **AR/VR and Artificial Intelligence** having over **200 participants**.
- Part of the Organising committee for **Relay Coding** held in the Technical Fest, **Gravitas**, and hosted an **awareness event on drug abuse**.

## ACHIEVEMENTS AND HOBBIES

- Awarded **Academic Excellence** by the Defence Ministry of India for securing the **top 10 All India Rank** during ISC Board Examinations.
- Secured **4<sup>th</sup> rank** in the **Maths Olympiad** organized by the Science Olympiad Foundation at the District Level and **67<sup>th</sup> internationally**.
- Bagged **1<sup>st</sup> prize** in choir competitions held during Independence Day consecutively **three times**.
- Awarded **gold medal** for **Academic Excellence** in ISC Board Examinations and secured a scholarship of 4 Lakh Rupees.

## TECHNICAL SKILLS

- Programming Languages:** Java, C, C++, Python, JavaScript.
- Technologies:** React.js, Node.js, Express.js, MongoDB, Tailwind, GitHub.
- Concepts:** GIT, REST APIs.
- Productivity Tools:** Microsoft PowerPoint, Canva.