

# Viren Tanti

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## Skills

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**Languages:** C/C++, Python, Assembly (ARM/x86), JavaScript, SQL

**Technologies & Tools:** STL library, Matplotlib, TensorFlow, Scikit-learn, OpenCV, MATLAB, VHDL/Verilog, Arduino, Raspberry Pi Pico, SQL, Git, GitHub

**Soft Skills:** Team Collaboration, Problem-Solving, Critical Thinking, Time Management, Adaptability, Leadership, Communication, Creativity, Conflict Resolution, Decision-Making

## Project Work

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- **Digital Clock System (2024)**

*Technologies Used:* Assembly Language, Hardware Interfacing

- Developed a hardware-based digital clock system using the 8086 microprocessor.
- Interfaced the 58167 RTC chip to retrieve real-time data.
- Displayed time on 7-segment displays using 7447 BCD to 7-segment decoders.
- Programmed in assembly language to handle RTC communication and output time digits via memory-mapped I/O.
- Designed the circuit to ensure efficient hardware-software integration.

- **Alternative-Routes in Road Networks (2024)**

*Technologies Used:* C++, OpenGL

- Applied Dijkstra's shortest path algorithm to find the fastest route in road networks with randomly generated traffic.
- Implemented methods to avoid collisions by dynamically adjusting vehicle speeds.
- Simulated road traffic and routes using the OpenGL library for visualization.

- **Seep Game AI and Simulator (2025)**

*Technologies Used:* Python, C++, Game AI, Algorithm Design

- Developed a Python-based AI for the traditional card game Seep to optimize gameplay, similar to chess AI.
- Implemented a game simulator adhering to rules such as bidding, house formation, and scoring.
- Integrated Python for AI logic and C++ for efficient graph-based card and table state management.
- Utilized advanced algorithms to predict and execute winning moves in real-time game scenarios.

## Volunteer Experience

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- **Vice Chairperson, ICP Club (2024–2025)**

- Supervised and guided club activities focused on blockchain technology, fostering innovation and knowledge sharing.
- Played a key role in planning and executing seminars, hackathons, and collaborative projects related to blockchain and distributed systems.
- Developed skills in team leadership, project coordination, and strategic planning, while emphasizing teamwork and adaptability.

- **Programming Team Lead, IEEE JUIT Student Chapter (2022–2024)**

- Led a team of programmers to organize technical workshops and coding competitions, enhancing campus engagement in technical activities.
- Collaborated with cross-functional teams to manage events, ensuring smooth execution and active participation.
- Strengthened leadership, communication, and organizational skills through team management and event planning.

# Education

Jaypee University of Information Technology

Aug 2022 - Jun 2026

B.Tech. in Computer Science and Engineering with Minor in Electronics and Communication Engineering

Relevant Coursework: Object Oriented Programming, Databases, Discrete Mathematics, Data Structures and Algorithms, Operating Systems, Computer Networks, Machine Learning, Data Mining, 8086 and Intel Family Microprocessor programming, Theory of Computing, Compiler Design, Artificial Intelligence, Analogue and Digital Communication, Digital Electronics, Computer Organization and Architecture

## Certificates

### J.P. Morgan - Software Engineering Job Simulation

- Set up a local dev environment by downloading the necessary files, tools, and dependencies.
- Fixed broken files in the repository to make the web application output correctly.
- Used JPMorgan Chase's open-source library called Perspective to generate a live graph that displays a data feed in a clear and visually appealing way for traders to monitor.