VANSH KANSAL

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EDUCATION

Thapar Institute of Engineering and Technology - Computer Science   **2022 – 2026(expected)**
*Excepted in 2026 - **CGPA** - **8.26***   *Patiala, India*

PROJECTS

Topsis-Package 🌐 | Python, Pandas, NumPy
- Developed a Python package for multi-criteria decision-making using the TOPSIS method.
- Enables ranking of alternatives based on multiple weighted criteria, handling both positive and negative impacts.
- Published on PyPI, available via `pip install Topsis-Vansh-102203021`.
- Provides CLI and Python script support with robust error handling and validation.

Paragraph to QnA Generator(Para2Ques) | Python, NLP, Hugging Face, PyTorch, Pandas
- Developed an NLP-based system using T5 transformers to generate questions and answers from paragraphs with high accuracy.
- Implemented a fine-tuned training pipeline using PyTorch and Hugging Face Transformers, leveraging SQuAD-like datasets for better performance.
- Built a Flask-based web interface that allows real-time input of paragraphs and dynamically generates structured QnA responses.

AidBridge NGO 🌐 | HTML, CSS, JavaScript, Node.js, Express.js, Angular.js
- Developed a full-stack web application that enables users to donate and procure medicines efficiently.
- Designed an intuitive frontend using Angular.js and built a secure Node.js backend with MongoDB for storage.
- Implemented real-time medicine availability tracking and integrated user authentication for secure access.

Room Sync: Smart Room Automation | Flutter, IoT, Microwave Radar, Sensors
- Developed an IoT-based smart automation system with a Flutter app for controlling appliances based on motion and sleep detection.
- Integrated microwave radar sensors to detect motion and automatically adjust lighting, AC, and fans for energy efficiency.
- Implemented secure access control using Thapar email authentication, restricting access to authorized users only.

TECHNICAL SKILLS

Languages: C, C++, Python, R
Databases: MongoDB, Oracle Live SQL
Tools & Technologies: Arduino Programming, AutoCAD , Git
Developer Tools: VS Code, Jupyter Notebook, Arduino IDE, Kaggle

COURSEWORK / SKILLS

- Data Structures & Algorithms
- Operating Systems
- Computer Networks
- Database Management System (DBMS)
- Artificial Intelligence
- OOPS
- Data Science
- CAO
- Machine Learning
- Web Development

ACHIEVEMENTS

- **Consecutively awarded the Thapar Merit Scholarship for 2023-2024 and 2024-2025.**
- **Solved 200+ coding problems on platforms like LeetCode and CodeChef, regularly participating in coding contests to enhance problem-solving and algorithmic thinking.**