Sachin goyal

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# Education

## BE/B.Tech Computer Engineering | Thapar Institute of Engineering and Technology | CGPA 7.97 2023– 2027

# Technical Skills

Programming Languages: C, C++, Python, R, MATLAB

AI & Data Science: Machine Learning, Generative AI (LLMs, Prompt Engineering, RAG), Data Analysis, Data Visualization

Databases: MySQL, Neo4j

Tools & Platforms: FastAPI, LangChain, VS Code, GitHub, Google Colab, AutoCAD, Hugging Face

# Projects

## Ai Chatbot & Automation Suite | Thapar Institute of Engineering and Technology | [Project](https://y09q98g4gc81-deploy.space.z.ai/) Jun 2025 – present

* Technologies: **Generative AI** | Agentic AI | RAG
* Developed **Agentic AI** applications, including a Course Generator (roadmaps + templates) and an AI YouTube Blog Generator.
* Implemented intelligent assistants such as a **Code Assistant**, Math Solver, Content summarizers for YouTube videos & websites.
* Created a **Database Query Chatbot** enabling natural language interaction with databases without SQL knowledge.

## Smart India Hackathon 2025 – Rockfall Prediction & Safety System Aug 2025 – present

## *Technologies: Agentic AI, IoT, Machine Learning, Python, React.*

## Selected problem statement: **AI-based system for predicting and mitigating rockfall incidents in open-pit mines**.

## Designing a smart app with **real-time risk maps, alert mechanisms (SMS/email), and incident tracking**.

## Implementing **IoT sensor integration** (displacement, pore pressure, vibration) for proactive monitoring.

## Contributing to the **Agentic AI assistant** module to support miners with safety guidance and automated emergency response.

## Target outcome: **cost-effective, scalable solution** enhancing mine safety through predictive analytics and AI-driven decision support.

## Personal AI Health Assistant | Thapar Institute of Engineering and Technology | [Project](https://huggingface.co/spaces/SachinGoyal94/Persona_Health_Assistant) Jan 2025 – May 2025

* Technologies: Python, Gradio, scikit-learn, Pandas, GeoPy, KNN, Random Forest.
* Built an ML-based Sleep Quality Predictor using Random Forest on a lifestyle dataset with custom health advice logic.
* Developed an interactive Gradio interface that provides personalized diet recommendations based on nutritional needs, predicts diseases from symptoms, and locates nearby doctors.

## Open-CV-Vehicle-Detection| Thapar Institute of Engineering and Technology | [Project](https://github.com/SachinGoyal94/Open-CV-Vehicle-Detection) Jun 2025 – July 2025

* *Technologies: Python, OpenCV, YOLOv8.*
* Demonstrated skills in computer vision pipeline development and real-time object detection.
* Built a real-time vehicle detection and tracking system using OpenCV and YOLOv8 to process and annotate video streams. Utilized the lightweight YOLOv8n model for fast and accurate vehicle recognition.

# involvement

* Selected to attend **Google Cloud AI Lab Series** (In-person), gaining exposure to advanced Generative AI applications and industry best practices.
* **Cleared Internal Hackathon for SIH 2025:** Qualified for the next round of the **Smart India Hackathon 2025**.
* Guinness World Record Holder – Participated in the AICTE Python programming event with 112,319 participants.

# Competitive Programming & Practice

* Solved **300+ DSA** problems across platforms.
* Codolio: [Sachin Goyal | Codolio](https://codolio.com/profile/S_Goyal27)
* Focused on problem categories such as DP, Graph algorithms, and sorting techniques.