

Harsh Gupta

📞 +91 6262402648 | 📩 harshgupta2022@vitbhopal.ac.in | LinkedIn | GitHub | Jabalpur, India

Education

Vellore Institute of Technology (VIT), Bhopal	Bhopal, MP
<i>Bachelor of Technology in Computer Science Engineering — CGPA: 8.54</i>	2022 – 2026
Saraswati Shishu Mandir Sr. Sec. School	Jabalpur, MP
<i>Higher Secondary Education (12th Grade) — Percentage: 86%</i>	2020 – 2021
St. Aloysius Sr. Sec. School	Jabalpur, MP
<i>Class 10th (Secondary) — Percentage: 87.8%</i>	2018 – 2019

Technical Skills

- Programming & Scripting:** Python, SQL, C++, REST API Integration, Streamlit, Tkinter
- Machine Learning & AI:** Deep Learning (LSTM, RNN), Time-Series Forecasting, NLP, LangChain, Retrieval-Augmented Generation (RAG)
- Computer Vision:** OpenCV, LBPH Face Recognition, Pillow, Real-Time Video Stream Processing
- Libraries & Frameworks:** Pandas, NumPy, TensorFlow, PyPDF2, Matplotlib, Seaborn, yFinance, TA-Lib
- Data Engineering:** Data Pipelines, ETL Processes, Yahoo Finance API, Data Visualization
- Tools & Utilities:** Git, VS Code, MySQL, pyttsx3, API Automation

Technical Projects

Stock Price Prediction Platform — Python, LSTM, Streamlit, Yahoo Finance API

- Engineered an AI-powered platform using **LSTM networks** to analyze 5+ years of historical data for precise market trend predictions across **1,770+ NSE-listed stocks**.
- Automated data pipelines for acquisition, preprocessing and visualization**, reducing manual effort by **50%** and enabling interactive analytics for multiple active users per session.
- Integrated **Yahoo Finance API** with a responsive Streamlit dashboard, enabling real-time market insights, interactive visualizations, and actionable trend analysis with 11+ technical indicators.
- Applied advanced **time-series forecasting, deep learning and machine learning techniques** to deliver precise next-day stock price predictions, aiding investors in decision-making.

Face Recognition Attendance System — Python, OpenCV, Tkinter, Pandas, NumPy, Pillow, pyttsx3

- Developed an AI-powered **attendance management system** using OpenCV and LBPH, capable of recognizing more than 100s of students per session and generating automated CSV records per class.
- Built an interactive **Tkinter GUI** supporting both automatic and manual attendance, handling more than 100 student entries daily with validation and notifications.
- Implemented facial dataset creation and training pipeline using **Python and Pillow**, enabling efficient, scalable **LBPH model** training for accurate real-time face recognition.
- Enabled **live webcam streaming, remote camera support, and audio notifications via pyttsx3**, providing real-time monitoring across multiple classrooms.

Multi-Modal Chatbot Platform — Python, Streamlit, LangChain, OpenAI, Ollama, SQL, PyPdf2

- Deployed a **multi-modal chatbot** platform with 6 integrated modalities, including context-aware conversations, document-based QA, SQL database queries, internet-enabled search, and web content retrieval.
- Implemented **LangChain ConversationBufferMemory** for robust chat history management, enabling context-aware, multi-turn LLM responses and personalized, intelligent user interactions.
- Developed a **Retrieval-Augmented Generation (RAG) pipeline** using PyPDFLoader, FastEmbed and DocArrayInMemorySearch, delivering highly relevant document-based answers for files upto 15MB.
- Integrated real-time data access through **DuckDuckGo** search and SQL databases for live events and structured queries.
- Built an interactive **Streamlit interface** with a modular chat UI supporting all 6 AI modules, enabling seamless **LLM switching (OpenAI, Ollama)** and real-time streaming responses for an intuitive, user-focused experience.
- Applied **prompt engineering, LLM orchestration and memory optimization**, enhancing response accuracy and context retention by **25%**.

Achievements

- Received the prestigious **Mukhyamantri Medhavi Chhatra Yojana scholarship** valued at **6 lakh** for academic excellence.
- Successfully completed the **100 Days of Coding challenge** on LeetCode, focusing on Data Structures and Algorithms.
- Solved **over 500 algorithmic problems** on LeetCode, demonstrating strong analytical and coding abilities.

Certifications

- Complete Generative AI with LangChain & Hugging Face - Udemy (2025)
- Complete Data Science, Machine Learning, DL, NLP Bootcamp - Udemy (2025)