Harshit Chakravarti

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EDUCATION

Vellore Institute of Technology (VIT), Bhopal Bhopal, India
B.Tech in Computer Science & Engineering (Spec. in AI & ML) *2023 – 2027*
- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Database Management, Machine Learning, Neural Networks, Deep Learning, Computer Networks

TECHNICAL SKILLS

Programming Languages: Python, C++, Java, JavaScript, SQL
Machine Learning: PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn
Full Stack: React, Express.js, Flask, Node.js
Developer Tools: Git, GitHub, AWS, Jupyter Notebook, PowerBI, Tableau, MongoDB, Supabase

PROJECTS

Multimodal Speech Emotion Recognition | *Bi-LSTM, Transformers, CNNs, RNNs* Jun 2025
- Engineered a multimodal DL framework using Bi-LSTM, CNN, and Transformer architectures, achieving **87% accuracy** in emotion classification on the RAVDESS dataset
- Leveraged RAVDESS and CREMA-D datasets for acoustic, semantic, and linguistic analysis, enhancing student engagement prediction by **15%** over unimodal approaches

RAGBot - Multi-AI RAG Chatbot | *LangChain, MongoDB, Groq Cloud, Gemma-9B-IT* Jun 2025
- Implemented a RAG system integrating LangChain and MongoDB vector storage, reducing hallucination by **40%** and achieving **100ms latency** via Groq API
- Developed a LangGraph-based search system for enhanced vector and knowledge retrieval serving multiple users for testing of AI chatbot interaction.

VitalAI - Personalized Healthcare Assistant | *Next.js, Flask, Supabase* Apr 2024
- Created a health monitoring platform using Next.js with Google Fit integration and Random Forest models achieving over **90% accuracy** in risk prediction of Diabetes, Cardiovascular and Skin diseases.
- Designed Flask APIs handling **100+ concurrent requests** with **less than 200ms response time** and a user personalized dashboard for tracking health trends

Kislay Naturals E-Commerce Platform | *MERN Stack, Razorpay, JWT* Aug 2025
- Engineered a full-stack e-commerce solution with React frontend, Node.js/Express backend, and MongoDB for a monk fruit sweetener based startup - Kislay Naturals
- Implemented secure payment processing with Razorpay integration and JWT authentication for user management and transaction security

CERTIFICATIONS

Python for Data Science & ML Bootcamp Jan 2025
Udemy

PyTorch for Deep Learning Bootcamp June 2025
Udemy

Summer School on Remote Sensing and GIS May 2022
ISRO Dehradun

ACHIEVEMENTS & LEADERSHIP

Academic Excellence Apr 2023
CBSE Class XII: 91% (2023), CBSE Class X: 95.6% (2021)

JEE Mains 2024 Jan 2024
98 %ile

Vice House Captain Mar 2023
Led Chenab House (2022-23) at Delhi Public School, Dwarka