

Darshan Kochar

Raipur, C.G | darshan23100@iiitnr.edu.in | 9691457906 | linkedin.com/in/darshankochar
github.com/darshankochar22

Education

IIIT Naya Raipur, Btech in Computer Science

Aug 2023 – May 2027

- GPA: 7.85

Projects

ResourceX – Decentralized GPU Resource Sharing Platform

GitHub Repository

- Built a peer-to-peer GPU exchange with passwordless SSH key-based authentication, reducing login time by ~80%.
- Integrated Tailscale VPN for sub-50ms provisioning and Docker sandboxes with CPU/GPU/memory caps.
- Deployed a lightweight job scheduler handling 100+ concurrent tasks across distributed containers.
- **Tech Stack:** SSH, Docker, Tailscale, FastAPI, Gemini.

Inventroy Management System for Jungle Safari

GitHub Repository

- Developed a gamified inventory management system for offline and VR-based e-commerce stores, enhancing engagement and operational efficiency.
- Built a future-forward AI-powered e-commerce platform with fully automated vendor management, billing, and purchase systems.
- Implemented AI-driven product recognition and auto-listing for inventories using Google Gemini for real-time scalability.
- Integrated sentiment analysis on customer reviews to extract actionable insights and boost customer satisfaction.
- **Tech Stack:** LangChain, Gemini, Node.js, Groq, LLaMA 3, React, Three.js, FastAPI.

empowHER: AI-Powered Carrer and Job Search Agent

Deployed Link

- Built an AI agent that chat with women and giv arrer guidance bassed on profile
- Chabot with memory storing history in databse monogdb, and job search using search APi Tavily and scraping tool diffbot, community, Learning resources etc
- Tools Used: LangChain, Neo4j, Groq, llama-3, Next.js, MongoDB, Nodejs, FastAPI.

GitGraphium: AI-Powered Code Query Agent

Demo

- Built an AI agent that processes a GitHub repository and answers user queries regarding the same.
- Extracts functions, generates structured representations, and retrieves relevant code snippets based on user queries.
- Tools Used: LangChain, Neo4j, Groq, llama-3, MiniLM-L6-v2, FastAPI.

ZenLearn: Learning supporting Mental Health

GitHub Repository

- Developed learning platform with real-time stress detection system detecting facial expressions and behavioural changes, meditation posture and eyes detection with realtime feedback.
- Built AI chatbots for problem-solving, reasoning. video-to-text, and LLM supported search engine.
- Made Audio effects for a VR bassed speaking platform with virtual audience
- Tools Used: React, Node.js, Python, FastAPI, OpenCV, Mediapipe, DeepFace, ElevenLabs, DeepSeek R1, Pygame, Gemini.

CyberCrime Classifier: Multi-Class, Multi-Level Categorization

GitHub Repository

- Fine-tuned BERT for classifying CyberCrime complaints into 3 main categories and 60 subcategories using the National Cyber Crime dataset.
- Tools Used: PyTorch, Hugging Face Transformers, BERT, ChromaDB, Pandas, Matplotlib, NLTK.

Product Source: AI-Powered Procurement Assistant

Live Demo

- Built a chatbot to predict the manufacturer, origin, and price of IT infrastructure products across platforms to

assist in procurement decisions.

- Tools Used: LangChain, Diffbot, BeautifulSoup (bs4), FastAPI, Next.js.

Dynamic Traffic Autonomous System

GitHub Repository

- Developed an algorithm for dynamically adjusting traffic signal timing based on real-time data and computer vision analysis.
- Integrated a special feature to prioritize ambulances for emergency response.
- Tools Used: YOLO, OpenCV, Python, Pandas, C++.

Technologies

Languages and Frameworks: Git Github, Node.js, Next.js, Javascript, React, MongoDB, Nodejs, Python, PyTorch, Scikit-learn, FastAPI, langchain, tensorflow, C++, Docker, SSH

Tools: Chroma-db, Vector databases Graphs, V0, Cursor, Claude

Achievements

Winners GHR Hacks 1.0, Code the Unexplored

Winners Hack-O-Harbour

Winners Bit-2-Byte

Winners Hack-Byte-3.0, Midnight track

Overall Winners HackPrix Season 2

Track Winners DSU Devhack 2.0, Best use of MongoDB

Top 5 teams Industry Academia Meet project presentaton