

Nikhil

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SUMMARY:

AI & Data Science undergraduate with hands-on experience in building production-oriented AI systems, including RAG pipelines and real-time computer vision applications.

TECHNICAL SKILLS:

- **Frontend:** JavaScript, React Js
- **Backend:** Python, C, C++, Java (Basics), R (Basics)
- **DevOps:** Linux (Basics), Docker
- **Database:** MySQL, MongoDB

EXPERIENCE:

[\[Link\]](#) **Reliable RAG-Based Knowledge System** – Personal Project

Tech Stack: Python, FastAPI, LangChain, RAG, LLM APIs, Sentence Transformers, MongoDB, Similarity Search, Source Verification, Git

- Built a source-verified RAG system for reliable knowledge retrieval.
- Implemented embedding-based similarity search using vector databases.
- Integrated LLM APIs with confidence thresholds to reduce hallucinations.
- Exposed functionality via FastAPI for scalable inference.
- Logged queries and metadata using MongoDB for traceability.

[\[Link\]](#) **Facial Emotion Detection System** – Personal Project

Tech Stack: Python, OpenCV, DeepFace, NumPy, Real-Time Computer Vision, Git

- Developed a real-time facial emotion detection system using computer vision.
- Performed live face detection and emotion classification via webcam input.
- Integrated DeepFace models for emotion inference.

[\[Link\]](#) **Anomaly Detection System** – Personal Project

Tech Stack: Python, OpenCV, Deep Learning, Anomaly Detection, Video Analytics, Git

- Developed an anomaly detection system to identify abnormal patterns in video data.
- Applied computer vision techniques for motion and behavior analysis.
- Implemented model-based detection to flag deviations from normal activity.
- Processed real-time or recorded video streams using OpenCV pipelines.
- Designed the system for continuous monitoring and alert generation.

TRAINING:

SkillStone, Chandigarh – Python Technology

Duration: 45 Days (Summer 2024)

- Integrated basic Web apps focused on Frontend and Backend functionality using Python.
- Worked with MongoDB for data storage.

EDUCATION:

Chandigarh Group of Colleges, Landran | Bachelor of Technology in Artificial Intelligence & Data Science