# RONITH DHANESH

+91-6238159514 | ronithdhanesh@gmail.com | LinkedIn | GitHub

## EDUCATION

- **VIT Bhopal University, Madhya Pradesh** **(***August, 2022- pursuing)*
  B. Tech CSE (AIML) | CGPA: **8.52**

## SKILLS

- **Programming Languages:** Python, Java, JavaScript, SQL
- **AI/ML and Libraries:** TensorFlow, PyTorch, LangChain, LangGraph, Scikit-learn, OpenCV, NumPy, Pandas
- **Web Technologies:** HTML, CSS, Streamlit, FastAPI
- **Tools and Frameworks:** Git, Docker
- **Core Competencies:** Generative AI & Agentic AI, Model Training & Evaluation, Computer Vision & Speech Recognition

## PROJECTS

**Multimodal Retrieval-Augmented Generation (RAG) System** *(June, 2025)*
*Python, LangChain, Google Gemini, CLIP, Streamlit, PyMuPDF*

- Engineered a multimodal RAG system that improved information retrieval efficiency by over 90% by synthesizing data from both text and images in PDF documents.
- Utilized a multimodal model like CLIP to process documents containing up to 500 images, achieving high-fidelity embeddings in a unified vector space.
- Optimized application performance by reducing index build time by 98%, using a pre-built and saved vector database to enable near-instantaneous query responses.
- Live Demo: https://multimodal-rag-app-ronith.streamlit.app/

**AI-Powered Medical Report Analyzer** *(June, 2025)*
*Python, LangChain, Groq, Tesseract OCR, Streamlit*

- Engineered an AI-driven medical report analysis system by integrating OCR and LLMs via a LangChain framework to automate the extraction and interpretation of critical medical terminology.
- Developed a responsive web application with Streamlit, enabling real-time, multi-format and batch processing that reduced manual review time for medical reports by over 60%.
- Implemented robust data validation pipelines and error handling, significantly enhancing diagnostic workflow efficiency and improving accuracy for healthcare professionals.

**Real-Time Vehicle Detection and Counting System** *(April, 2025)*
*Python, OpenCV, YOLOv8, SORT, Numpy*

- Developed a computer vision pipeline that accurately monitors and counts vehicles in complex traffic scenarios using YOLOv8 detection and the SORT tracking algorithm.
- Optimized model performance by implementing binary masking techniques, achieving a stable 30+ FPS and a 40% reduction in computational load.
- Created an automated traffic data collection solution for urban planning initiatives, reducing the need for expensive and error-prone manual counting methods.

## EXTRACURRICULARS

- **Certifications**: IBM GenAI using Watsonx | IBM Blockchain Developer | IBM Blockchain Fundamentals | Applied Machine Learning in Python – Coursera | Gen AI – AdroIT Technologies | Blockchain – AdroIT Technologies
- **Media Team Lead:** Malayalam Club – Directed content strategy and managed all social media platforms to promote club events and enhance public presence and engagement.
- **Strengths**: Public speaking, event and people management, budgeting, creative planning, and leadership.

## ADDITIONALS

- **Languages**: Fluent in English, Malayalam and Hindi