Yashas M Shetty

yashas2604@gmail.com | 9008401911 | LinkedIn: yashas2604 | Portfolio: yashas2604.vercel.app

EDUCATION

New Horizon College of Engineering **Bangalore, KA**
B.E. in Artificial Intelligence and Machine Learning *Expected May 2026*

- **GPA:** 8.24/10.0
- **Related Coursework:** Machine Learning, Deep Learning, NLP, Computer Vision, Artificial Intelligence

SKILLS

Programming and Frameworks: Python, HTML, CSS, C++, SQL, RPA using Automation Anywhere
Tools: Scikit-Learn**,** TensorFlow, PyTorch, LangChain, RAG, Supabase, Git, Docker

PROJECTS

Proximity detection and safety zone monitoring using computer vision - *[YOLOV5]* **Bangalore, KA**
Team Project *May 2024 – Aug 2024*

- Developed a computer vision-based system to enhance site safety by monitoring activities and ensuring workers do not accidentally enter dangerous/hazardous zones in factories and construction sites.
- Utilized YOLOv5 to implement proximity detection, preventing unauthorised entry into restricted or hazardous areas by tracking workers and using virtual hazardous zones using ROI and bounding boxes.
- This project uses real-time image recognition to detect safety violations and generates instant alerts for corrective action, reducing the risk of accidents, and fostering a safer work environment.

RAG Chatbot - *[Ollama, FAISS, Huggingface, FastAPI]* **Bangalore, KA**
Team Project *May 2024 – Jun 2024*

- Built a Retrieval-Augmented Generation chatbot that answers queries from uploaded PDFs using semantic search with FAISS and HuggingFace embeddings.
- Integrated Ollama LLM (Llama 3.2:3B) via LangChain with conversational memory and custom prompt templates for summarization and reasoning.
- Developed a FastAPI backend for vector indexing and a Streamlit frontend for interactive chat with real-time Q&A.

Inventory Management System - *[Flask, MySQL, HTML/JS, Rest API,]* **Bangalore, KA**
Team Project *Jun 2024 – Aug 2024*

- Built a role-based inventory management system with authentication for Admin, Staff, and Viewer to control access to products, users, and transactions.
- Implemented vendor and customer management with relational tables, foreign key constraints, and CRUD operations via REST APIs and testing through Postman.
- Added transaction tracking (IN/OUT) with automatic stock updates, Excel import/export for bulk product management, and audit trails for business transparency.

Breast Cancer Detection Using Deep Learning on Histopathological Images - *[Python, Tensorflow, VGG16]* **Bangalore, KA**
Individual Project *Oct 2024 – Feb 2025*

- Trained a deep learning model using VGG16 transfer learning on 7,900+ histopathological images to classify breast cancer as benign or malignant achieving 88% classification accuracy.
- Preprocessed large-scale medical image data, normalized pixel values, and handled class imbalance for robust real-world performance.

Zen.AI **Bangalore, KA**
Team Project *Mar 2025 – Present*

- Collaborated with a team of 5 for the development of a comprehensive SaaS, assessment and placement preparation portal tailored for institutions and recruitment partners.
- Building an AI-proctored test taking platform useful for both colleges and companies for mock and real evaluations.
- Integrating an AI powered resume builder based on job descriptions with ATS compatibility.

- Contributed to integration of email system and development of dynamic feedback form for student-company evaluation. Developing an end-to-end solution with useful features such as an Email System, Calendar, Course Material and Discussions Forums.

Song Recognizer - *[Librosa, Scipy]* **Bangalore, KA**
Individual Project *Mar 2024 – May 2024*

- Developed Python script using the Librosa library to replicate Roy van Rijn's song recognition algorithm.
- Extracted frequencies from given audio clips using a Short Time Fourier Transform (STFT) algorithm present in the Scipy library.
- Built a database of audio fingerprints for a set of MP3 files and compared the fingerprints to identify the song.

ACHIEVEMENTS AND CONTRIBUTIONS

- **Research Paper (ICICC 2025):** System and Method for Virtual Boundary Detection and Warning of Safety Zone Violations in Construction and Industrial Environments - **Paper ID: 1346**