

Tanay D. Ingale

Aspiring AI Engineer | ML Developer | Full-Stack Enthusiast

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🌐 <https://www.tanayingale.space/> | 💻 GitHub: <https://github.com/TanayDI>

Professional Summary

AI engineer with a strong background in machine learning, computer vision, and language models. Experienced in deploying models on edge devices, integrating LLMs into real-time systems, and building full-stack intelligent applications. Adept at solving practical problems using cutting-edge AI and delivering solutions from research to production.

Technical Skills

Languages & Tools: Python, JavaScript, React, SQL, HTML/CSS, Git, Firebase

ML/AI Stack: PyTorch, OpenCV, ONNX, llama.cpp, SmolVLM, Transformers, LangChain, FAISS

Domains: LLMs, Computer Vision, OCR, Face Recognition, RAG, Web Automation

Soft Skills: Leadership, Communication, Teamwork, Problem Solving, Rapid Learning

Projects

- Open-aadmi - AI Assistant for Web Automation

Mar 2025 - Mar 2025

Built an AI assistant that automates web tasks using Puppeteer and OpenAI LLMs. Enabled voice-controlled browsing with Chrome extension and real-time agent execution.

- Med-AI - Vision & LLM-Based Prescription Analyzer

Mar 2025 - Apr 2025

Combined OCR and vision transformers for digitizing handwritten prescriptions. Used fine-tuned LLMs for structured extraction of medical entities and voice-based queries.

- Instagram Manager - Agent-Based Social Media Automation

Apr 2025 - May 2025

Automated content workflows using MCP APIs, LLM-driven captioning, and performance analytics. Developed a dashboard with React + Firebase and integrated AI agents via LangChain.

- SimpleRAG - Modular RAG Toolkit

Mar 2025 - Mar 2025

Built lightweight RAG pipelines for YouTube Q&A, PDF summarization, and recipe recommendations. Used FAISS/Chroma for vector search and LLMs for dynamic responses via Streamlit UIs.

- Smart Campus Surveillance System

Sep 2024 - Feb 2025

Developed a real-time security system integrating face recognition and behavioral analysis. Used llama.cpp + SmolVLM for lightweight vision-language model inference on local machines. Fine-tuned vision models for activity detection (e.g., fights, weapons) and deployed in a closed surveillance network.

- HydroVista - Plant Disease Detection System

Mar 2024 - Dec 2024

Built a PyTorch-based plant health monitoring model trained on custom hydroponic datasets. Deployed via a mobile app (React Native) with alert systems using REST APIs.

- High Payload Drone (RTN Southern Command)

Jun 2024 - Dec 2024

Trained object detection models for surveillance drones and deployed them on Raspberry Pi using ONNX. Optimized inference using OpenCV and ran models under constrained compute environments.

- LangChain-Based Information Retrieval System

Nov 2024

Embedded documents into vector databases and implemented natural language retrieval via LangChain. Output structured insights in JSON format for easy integration with other services.

Experience

- AI Research Intern - Vishwakarma University

Jul 2024 - Dec 2024

Deployed ONNX-based object detection and video frame interpolation models on edge devices. Collaborated on integrating AI into real-world IoT surveillance applications.

- Software Developer Trainee - Equations Work

Feb 2025 - Jul 2025

I worked on the full-stack development of AI-driven web applications, integrating LLM-based features and optimizing backend services for performance and scalability. My contributions included deploying AI models into production systems with a focus on real-time data processing and seamless user interaction. I developed Retrieval-Augmented Generation (RAG) systems using LangChain and vector databases to build efficient pipelines for document retrieval and question answering. Additionally, I implemented agentic workflows and leveraged MCP APIs to automate complex tasks within these applications.

Education

BTech - Computer Engineering, Vishwakarma University, Pune

2022 - 2025 | CGPA: 8.3

Achievements & Activities

- Shortlisted for publication - Springer ICSoftComp 2024
- Participant - IBM ICE Hackathon & Visionary Club Hackathon (2023)
- Winner - 10km Marathon, 2023