

Yash Karnani

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Projects

Agentic Research Analyst

github/agentic-research-analyst

- Established an agentic RAG system to extract insights from unstructured documents, cutting analysis turnaround **time by 60%**.
- Implemented self-evaluation loops with automatic re-retrieval to mitigate hallucinations, improving **factual accuracy by 35%**.

LLM-driven Data Analysis Executor

github/llm-data-analysis

- Built an LLM-powered CSV analysis tool that converts natural-language queries into code, reducing **manual analysis by 70%**.
- Architected sandboxed code execution and secure runtime validation with real-time visualizations; deployed via Streamlit.

Histopathologic Oral Cancer Detection

github/oral-cancer

- Engineered an end-to-end CNN model (TensorFlow, Keras) to classify histopathology images, achieving **92.45% test accuracy**.
- Improved clinical model robustness and generalization using dropout, batch normalization, and learning-rate scheduling.

Experience

GenAI Trainee, Woodpecker Analytics – Pune, MH

December 2025 - Present

- Developed core components of an augmented analytics platform using LLMs, RAG pipelines, and agentic workflows, delivering automated, decision-ready insights through an interactive dashboard.
- Designed intelligent analysis modules with semantic retrieval, autonomous planning, tool execution, and self-evaluation loops to improve insight accuracy and reduce hallucinations.

Junior Research Engineer - AI/ML, Rhenix Lifesciences – Remote

April 2025 – October 2025

- Analyzed 2 years of wearable sensor data using outlier detection, imputation, and resampling, executing hybrid anomaly detection and clustering pipelines to identify behavioral patterns.
- Modeled a sleep detection algorithm estimating onset, wake time, and duration with **60-minute MAE** using heart-rate signal processing; contributed to research paper writing under mentorship.

Education

GITAM University, B.Tech in Computer Science and Engineering (IoT)

August 2022 – Present

CGPA: 8.3/10.0

Kalmadi Junior College, HSC (12th)

March 2022

Percentage: 66.5%

Hutchings High School, ICSE (10th)

March 2020

Percentage: 96.6%

Skills

Programming Languages: Python, SQL, Java

Frameworks & Tools: TensorFlow, Keras, Scikit-learn, LangChain, FAISS, Streamlit, Tableau, Git

Core ML: Machine Learning, Deep Learning, Computer Vision, Time Series Analysis, Feature Engineering

Generative AI: Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), Agentic AI Systems

Soft Skills: Problem Decomposition, Systematic Debugging, Collaboration, Team Leadership, Public Speaking

Certifications

Introduction to Computer Vision and Image Processing, IBM

July 2025

Flow Designer, ServiceNow

January 2025

Advanced Data Analytics, Google

October 2024

Leadership & Activities

Analytics Lead, Meta Developer Circle

June 2024 – March 2025

TCD Intern, Training and Competency Development

March 2024 – March 2025

Achievements

Submitted a research paper titled Oral Cancer Detection using Neural Networks at an international conference.

April 2025

Stood 2nd in a 48-hour competitive coding hackathon with increasing difficulty across three rounds.

March 2024

Selected among 3000+ students for Catch Them Young at Infosys.

May 2018