

# Yash Karnani

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## Projects

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### 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

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### 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

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### 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

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**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

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### Introduction to Computer Vision and Image Processing, IBM

July 2025

Flow Designer, ServiceNow

January 2025

Advanced Data Analytics, Google

October 2024

## Leadership & Activities

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Analytics Lead, Meta Developer Circle

June 2024 – March 2025

TCD Intern, Training and Competency Development

March 2024 – March 2025

## Achievements

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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