

Yash Karnani

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Projects

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**.
- Enhanced performance with dropout, batch normalization, learning rate scheduling, early stopping, and optimizers.
- Trained and optimized deep learning model to address clinical histopathology classification problem in oral cancer detection.

Dynamic Traffic Management System

github/traffic-management

- Developed an AI-powered traffic optimization system using YOLO, reducing congestion by **20%** and traffic violations by **25%**.
- Implemented emergency vehicle prioritization and night-time vehicle detection, enhancing urban road safety.
- Built a real-time monitoring dashboard (React, Python) for live violation tracking and infrastructure planning.

Arrive O'Clock

github/arrive-o'clock

- Crafted a travel optimization app with Google Maps API for personalized route alerts, boosting user engagement by 30%.
- Integrated LLaMA 3-based recommendation engine, boosting user satisfaction by 25% through tailored travel suggestions.

Experience

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

April 2025 – October 2025

- Analyzed 2 years of **wearable sensor data** for outlier detection, imputation, and resampling to 6 samples/minute; executed a hybrid anomaly detection and clustering pipeline to identify behavioral patterns and daily habit similarities.
- Modeled a sleep detection algorithm to estimate sleep onset, wake time, and duration, achieving an **MAE of 60 min** using heart-rate trends and signal processing, and contributed to paper writing under Celltalk mentorship.

Java Developer Intern, Woodpecker Analytics – Pune, MH

May 2024 - June 2024

- Automated contract management and email processing, cutting manual effort and boosting **efficiency by 75%**.
- Spearheaded execution of a nationwide data science hackathon with 9,000 teams and an INR 100,000 prize pool.

Education

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

August 2022 – Present

CGPA: 8.3/10.0

Kalmadi Junior College, Intermediate

March 2022

Percentage: 66.5%

Hutchings High School, ICSE

March 2020

Percentage: 96.6%

Skills

Programming Languages: Python, SQL, Java

Frameworks & Tools: TensorFlow, Keras, Scikit-learn, OpenCV, NumPy, Matplotlib, Tableau, React, Git, Jupyter Notebook

Technical Skills: Data Analysis, Machine Learning, Deep Learning, Time Series Analysis, Feature Engineering, Computer Vision

Soft Skills: Analytical Problem-Solving, 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

Head of Logistics, Aeromodelling Club

June 2023 - December 2023

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