Harsh Joshi

✉ harshsmj1504@gmail.com · 9405547015 · in/harsh-joshi-20a30b20b · harsh-joshi-portfolio-zeta.vercel.app/

SUMMARY

Full stack AI/ML developer proficient in TensorFlow and PyTorch, with expertise in computer vision, NLP, and Generative AI. Experienced in model deployment and MLOps practices, leveraging tools such as React, PostgreSQL, Node.js.

SKILLS

AI/ML/MLOps : TensorFlow, PyTorch, Transformers, Scikit-Learn, OpenCV, Prometheus, LangChain, LangGraph, MLFlow

Web Development/Version control: React, Node.js, Flask, Django, FastAPI, HTML/CSS, MongoDB, Git, Jenkins, Docker, C++

EXPERIENCE

Data science intern

Agri Spectra AI   October 2024 – June 2025, Remote

· Built machine learning models for plant disease detection using hyperspectral data (512×512×204), improving classification accuracy by **~18%.**
· Processed and managed **100K+ TIFF images** across 117 classes with custom Python scripts and preprocessing pipelines.
· Collaborated on a private Hugging Face dataset repository, managing data versioning and enabling secure API-based access.
· Used MLflow to track and compare experiments, improving reproducibility and workflow efficiency by **30%.**
· Developed an **MVP** web application using React and Node.js to visualize NDVI, SSM, and weather data for agricultural insights; integrated Firebase for real-time data sync and deployed on Google Cloud Platform (GCP).

PROJECT

EduPath AI – Intelligent learning platform

edu-path-ai-theta.vercel.app/

· Developed an AI-powered agent using **React**, FastAPI, and LLMs to create dynamic, topic-based learning journeys for students.
· Implemented a backend system that generates explainers with step-by-step topic breakdowns, supporting images and YouTube videos. Reduced syllabus generation time by **15%** through the use of multi-threading.
· Designed auto-generated topic-wise quizzes and assessments via backend APIs with local storage management.
· Integrated a QnA system using session memory (**LangChain** + **custom vector store**) for interactive doubt resolution.
· Reduced average student learning time by **20%** through personalized content delivery and streamlined concept reinforcement.

Smart Answer Evaluator

smart-answer-evaluator.onrender.com/

· Developed a deep learning model that can compare the ideal answer with the student's answer and classify it into three classes: partial, correct, or incorrect. Further developed a formula that uses the probabilities of each class to determine the marks.
· Utilize the BERT architecture as the foundation and further customize it for paired text inputs, achieving an accuracy of **91%**.
· Used **Transformers** and TensorFlow to build the model, and Flask for the backend of the project.
· Reduced manual grading time by over **25%** while ensuring consistent, scalable, and unbiased evaluation.

VoiceCast AI – AI powered podcast generator

voicecast-ai.netlify.app/

· Developed an AI-powered podcast generator using **LangGraph**, transforming user topics into engaging episodes with two lip-synced AI avatars.
· Automated avatar video creation using Heygen API and text-to-speech, reducing manual video editing effort by **over 90%**.
· Built a scalable backend with **PostgreSQL**, SQLAlchemy, and Supabase, handling storage for **1000+ episodes** and user prompts.
· Designed a FastAPI + React full-stack architecture, achieving **under 2-second** response time for episodes retrieval.
· Implemented an automatic thumbnail generator using AI to create topic-relevant visuals, enhancing discoverability and user engagement.

EDUCATION

Bachelor of Engineering in Electronics and TeleCommunications

D.Y. Patil college of Engineering · Akurdi , Pune · 2026

CERTIFICATIONS

MLOPs Bootcamp : AI Operations For Success

Udemy, 2024

Deep Learning Masterclass with Tensorflow

Udemy, 2023