

# Kamyavardhan Dave

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## Professional Summary

AI/ML Engineer building production-grade systems across healthcare, accessibility, computer vision, and LLM applications using Python, FastAPI, Next.js, PyTorch, OCR, RAG pipelines, vector search, and cloud deployment.

## Education

### B.Tech in Artificial Intelligence and Machine Learning

JIET College of Engineering, Jodhpur

2023 – 2027

CGPA: 9.3/10

## Experience

### Research Intern – Data Science Division, HCLTech

*Time-Series Forecasting and Predictive Analytics*

Jun 2025 – Aug 2025

- Analyzed 114 months of aviation traffic data and engineered forecasting features for time-series prediction.
- Achieved 6.29% MAPE, improving prediction accuracy by 40% over baseline models.
- Reduced forecast error by 20% during volatile demand periods using ensemble forecasting techniques.
- Built a walk-forward backtesting pipeline for robust, production-aligned model validation.

## Projects

### Doctor Copilot | AI-Powered Healthcare Platform

*Process-once pipeline for reusable clinical workflows.*

2026

- Built a full-stack healthcare system using React, FastAPI, PostgreSQL, OCR, and LLM APIs for structured medical intelligence.
- Designed a process-once, reuse-everywhere pipeline powering 5 downstream workflows: dashboards, timelines, insights, chat, and reports.
- Reduced manual documentation effort by approximately 25% and improved workflow efficiency by approximately 30%.
- Implemented role-based access, consent-driven data sharing, and production deployment on Vercel and Railway.

### Lexara Air | AI Accessibility Platform

*Accessibility-first cognitive scaffolding for multilingual learners.*

2026

- Developed an AI platform converting exam PDFs into dyslexia-friendly learning flows using OCR, GPT-4 Vision, and text-to-speech.
- Built a 6-stage cognitive pipeline transforming complex questions into step-by-step learning checkpoints.
- Enabled support for 9+ Indian languages with adaptive typography and accessibility-focused UX.
- Integrated Next.js, FastAPI, Redis, AWS, and Tesseract for scalable deployment.

### Brain Tumor Detection System | Explainable Medical AI

*Prediction, uncertainty, and visual evidence in one workflow.*

2026

- Built an MRI-based classification system using 7,200 images across 4 classes with PyTorch and Streamlit.
- Implemented EfficientNet-B0 with attention, achieving up to 93% accuracy in tumor classification.
- Added Grad-CAM visual explainability and Monte Carlo Dropout with 20 passes for uncertainty estimation.
- Developed an interactive dashboard for real-time prediction, comparison, and interpretability.

### InternAI | AI Agent for Internship Strategy

*Data-driven internship strategy across matching, scoring, and tailoring.*

2026

- Designed an AI agent covering resume optimization, role matching, skill-gap analysis, and company intelligence.
- Integrated vector search and scoring logic to improve decision-making in internship selection workflows.
- Built dynamic LaTeX optimization pipelines for tailored resume generation and structured application strategy.

## Skills

**Languages:** Python, C++, SQL, JavaScript, Java

**Frameworks:** FastAPI, Next.js, React, PyTorch, TensorFlow, Scikit-learn, LangChain, Streamlit

**Databases/Cloud:** PostgreSQL, Prisma, Redis, AWS, GCP, Vercel, Railway

**AI/ML:** Machine Learning, Deep Learning, Computer Vision, NLP, OCR, Explainable AI, Time-Series Forecasting

**Generative AI:** LLM APIs, RAG, FAISS, Vector Search, Prompt Engineering, Structured Extraction

## Achievements & Certifications

**Achievements:** Silver Medalist – Academic Excellence; Top 20 Finalist – CodeFiesta 4.0

**Certifications:** Machine Learning Specialization – Stanford University (Andrew Ng); CS50 Python – Harvard; Full Stack Generative and Agentic AI