Chintan Dave AI/ML Engineer

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🪪 PROFILE

AI/ML Engineer with 1+ year of experience in computer vision, deep learning, and MLOps. Developed hyperspectral anomaly detection, EEG classification, and LLM-RAG systems. Proficient in Python, TensorFlow, PyTorch, YOLOv11, and model deployment. Winner of 4+ national hackathons including IIT Jammu LLM & RAG Bootcamp.

💼 EXPERIENCE

Trainee Software Engineer (Kadel Labs)

07/2025 – Present | Bhopal

- Built end-to-end computer vision pipelines for hyperspectral and thermal imagery, processing 5TB+ monthly data.
- Trained Autoencoder + Vision Transformer models (93% accuracy), improving anomaly detection precision by 35%.
- Optimized performance using ensemble modeling, custom loss, and distributed training on cloud GPUs.

Core Team Member (BCI Research Group)

- Developed CNN-LSTM EEG classification system (82% accuracy) for real-time brain-signal monitoring.
- Processed 15K+ EEG samples using FFT, wavelet, and statistical features for latency under 100 ms.
- Implemented end-to-end pipeline with PyTorch and optimized inference on live EEG streams.

📂 PROJECTS

Man-Made Anomaly Detection using Hyperspectral and Thermal Imaging

- Built deep learning pipeline for 200+ spectral bands with Autoencoder + Transformer (94% F1-score).
- Applied attention-based feature learning and mixed-precision training, cutting training time by 40%.

Real-Time ESG Insights Application using Pathway, RAG & LangGraph

- Built real-time ESG analytics platform with RAG + LangGraph, handling 50K+ docs under 200 ms latency.
- Integrated ChromaDB (1M+ embeddings) for semantic search and LLM-based summarization (94% relevance).

Inventory Management & Security Monitoring System

- Deployed Flask + YOLOv11 system reducing shoplifting by 60% via real-time video analytics and Twilio alerts.
- Built live WebSocket dashboard (100+ daily users) using OpenCV, MySQL, Docker for security monitoring.

📑 CERTIFICATES

Artificial Intelligence Fundamentals – IBM 🔗 — edX, 2024

Python Essentials 🔗 — Cisco, 2024

Networking Basics 🔗 — Cisco, 2024

Deep Learning with Python 🔗 — Udemy , 2024

🎓 EDUCATION

Bachelor of Technology (B.Tech) in Artificial Intelligence and Machine Learning
IIST
2022 – 2026 | Indore, India
CGPA: 7.8

Higher Secondary Certificate (HSC)
Excellence H.S.S
2021 – 2022 | Mhow, India
Percentage: 82%

Secondary Certificate (SC)
Rishi Valley Academy
2020 – 2021 | Mhow, India
Percentage: 94%

🧠 SKILLS

Programming — Python, C++, C, SQL, HTML, CSS

Machine Learning & Deep Learning — TensorFlow, PyTorch, Keras, Scikit-learn, CNN, RNN, LSTM, Transformer, Autoencoder, GAN, Transfer Learning, Feature Engineering, Hyperparameter Tuning, Cross-validation, A/B Testing

Computer Vision & NLP — YOLOv11, OpenCV, Hugging Face, LangChain, RAG, LLMs, Prompt Engineering, Fine-tuning

Data Engineering & Databases — Pandas, NumPy, MySQL, PostgreSQL, MongoDB, ChromaDB

MLOps & Deployment — Docker, GitHub Actions, MLflow, Weights & Biases Flask, FastAPI, Streamlit, REST API

Cloud & Tools — AWS, Google Cloud, Jupyter, VS Code, Power BI, Tableau, Git

🏅 AWARDS

1st Prize - Machine Learning Competition
Indore Institute of Science and Technology (50+ participants)
09/2024

3rd Prize - LLM & RAG Bootcamp
IIT Jammu & Pathway (500+ participants)
10/2024

1st Prize - Best Paper Presentation
IIST Internal Research Conference (20+ papers)
03/2024

3rd Prize - Internal Hackathon
Indore institute of science and technology (100+ teams)
02/2024