

Vraj Dobariya

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Key Skills

Programming Languages: Python, R, SQL
Databases & Vector Stores: MySQL, MongoDB, ChromaDB
AI/ML Frameworks & Libraries: Scikit-learn, XGBoost, PyTorch, TensorFlow, Keras, spaCy, Transformers & Diffusers (Hugging Face), LangChain, FastAPI, Streamlit
MLOps & Deployment: Docker, Kubernetes, CI/CD, AWS, Azure, MLflow

Professional Experience

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|---|---------------------|
| AtliQ Technologies Pvt. Ltd. | Vadodara |
| AI Intern (Remote) | Jan 2025 - Mar 2025 |
| <ul style="list-style-type: none">Developed a fruit freshness system and healthcare Q&A tool, driving communication with a cold storage firm and healthcare company to define needs, showcasing early responsibility that grew over time.Progressed to spearhead preprocessing of 16,000 fruit images and tuned a ResNet50 CNN, leveraging analytical skills to cut processing time by 30% and lift accuracy from 69.44% to 99.85%, earning recognition for impactful internship growth and technical ownership.Collaborated on an AI tool by enhancing LLaMA 3 with RAG and retrieving PubMed data, uniting teamwork and strategic oversight to deliver fast, evidence-based fasting insights for clinicians, boosting efficiency. | |
| Skills: PyTorch, Deep Learning, NLP, Generative AI | |

Projects

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|---|---------------------|
| Intelligent Chatbot Using RAG - E-commerce Project Link | |
| [LLaMA 3.3 / Groq / SQL / HuggingFace / ChromaDB] | Oct 2024 - Jan 2025 |
| <ul style="list-style-type: none">Engineered a conversational chatbot leveraging Retrieval-Augmented Generation (RAG) with LLaMA 3.3 (Groq), enhancing user experience by approximately 60% and boosting revenue potential by 40% through tailored, context-aware interactions that improved customer engagement.Integrated semantic routing and real-time SQL queries using HuggingFace embeddings and ChromaDB, streamlining data retrieval processes and replacing inefficient filters and FAQs, which optimized system efficiency and reduced response times. | |
| RAG-Driven Research Tool - Real Estate Project Link | |
| [Langchain / Transformers / HuggingFace / RAG / LLM] | Oct 2024 - Nov 2024 |
| <ul style="list-style-type: none">Engineered a Streamlit-based web app with Retrieval-Augmented Generation (RAG), slashing LLM API costs by ~70% and research time by ~50% for real estate insights, delivering precise, URL-driven answers using LangChain's UnstructuredURLLoader tool.Spearheaded the integration of HuggingFace's all-MiniLM-L6-v2 embeddings and ChromaDB retrieval system, driving analytical efficiency and fostering teamwork to produce scalable, source-referenced outputs via Llama3 platform.Led communication with users to gather feedback and refine detailed requirements, showcasing leadership in deploying a cost-effective, high-impact tool that accelerates real estate decisions by ~50% with robust insights. | |
| Damage Detection Using Deep Learning - Automobile Project Link | |
| [PyTorch / CNN / EfficientNet / ResNet / Hyperparameter Tuning] | Aug 2024 - Sep 2024 |
| <ul style="list-style-type: none">Designed and implemented a CNN-based deep learning model leveraging transfer learning, boosting prediction accuracy from 57.74% (baseline) to 80.87% through EfficientNet and ResNet fine-tuning.Optimized model performance using hyperparameter tuning (dropout: 0.2, learning rate: 0.005) and regularization techniques, enhancing robustness and scalability while integrating OpenCV for advanced computer vision preprocessing, improving dataset quality by 15%. | |
| Credit Risk Predictor - Finance Project Link | |
| [Scikit-learn / XGBoost / SMOTE Tomek / Optuna] | Apr 2024 - May 2024 |
| <ul style="list-style-type: none">Developed a Logistic Regression model for credit risk assessment, achieving 93% accuracy and 94% recall by mitigating class imbalance with SMOTE Tomek, reducing false negatives by 15% and enabling precise loan default predictions.Enhanced model performance through Optuna-based hyperparameter optimization, delivering scalable creditworthiness ratings (scores: 300-900), improving decision-making efficiency for financial stakeholders by 25%. | |

Education

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| California State University, East Bay | Hayward, USA |
| Master of Science - Statistics Data Science | Jan 2024 - Present |
| Adani University | Ahmedabad, India |
| Bachelor of Technology - Information Technology | Jun 2018 - Jul 2022 |

Achievements

- Earned a gold medal for achieving a 9.79/10 SPI and ranked in the top 15% nationwide in the GATE exam.
- Held the highest academic standing in the computer science class for two consecutive years.