# 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

**AtliQ Technologies Pvt. Ltd.**                                                                                    **Vadodara**

AI Intern (Remote)                                                                                              Jan 2025 - Mar 2025

- 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

**Intelligent Chatbot Using RAG** - **E-commerce**   **Project Link**

[LLaMA 3.3 / Groq / SQL / HuggingFace / ChromaDB]                                                 Oct 2024 - Jan 2025

- 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

- 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

- 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

- 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

**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.