

Vraj Dobariya

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Key Skills

Programming Languages: Python, R, SQL, C, C++
Databases & Vector Stores: MySQL, MongoDB, ChromaDB(Vector Search)
AI/ML Frameworks & Libraries: Scikit-learn, XGBoost, PyTorch, TensorFlow, Keras, OpenCV, spaCy, NLTK, Transformers, Hugging Face, LangChain, FastAPI, Streamlit, CUDA
MLOps & Deployment: Docker, Kubernetes, CI/CD Pipelines, AWS, Azure, MLflow, Linux, Unix-based OS, Git
AI/ML Expertise: Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, Generative AI, LLM, RAG, Agentic Workflows, Model Fine Tuning(Transfer Learning), Model Evaluation, Prompt Engineering, Reinforcement Learning
Data Science & Analytics: EDA(Numpy, Pandas, Matplotlib, Seaborn), Data Preprocessing, Feature Engineering, Hypothesis Testing, A/B Testing, Time Series Analysis, Forecasting, Big Data Technologies(Apache Spark, Hadoop), Data Visualization (Tableau, Power BI)
Core CS: Data Structures & Algorithms, Graph Analysis, Software Engineering (System Design, Testing, OOP), API Integration (REST, GraphQL), Agile Methodologies

Professional Experience

AtliQ Technologies Pvt. Ltd.	Vadodara, India
AI/ML Intern (Internship)	Dec 2024 - Mar 2025
<ul style="list-style-type: none">Led a team to develop two AI projects, driving communication with a cold storage firm and a healthcare company to define needs, completing a fruit freshness system and a Q&A tool using deep learning and generative AI.Spearheaded preprocessing of 16,000 fruit images and tuned a ResNet50 CNN, showcasing analytical skills to cut processing time by 30% and boost accuracy from 69.44% to 99.85%, earning recognition for impactful internship growth.Collaborated on a Streamlit-based healthcare AI tool, enhancing LLaMA 3 with RAG and retrieving PubMed data to deliver fast, evidence-based intermittent fasting insights for clinicians, improving decision-making efficiency.	
Skills: PyTorch, ResNet, Hugging Face, Transformers, LLMs, RAG, Streamlit, AWS, Agile Development, Teamwork	

Projects

Intelligent Chatbot Using RAG and LLM - E-commerce Project Link	
[Transformers / LLaMA 3.3 / ChromaDB / SQL / Semantic Routing / REST API / Prompt Engineering]	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 / ChromaDB / FastAPI / System Design / Communication / Agentic Workflows]	Aug 2024 - Sep 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 requirements, showcasing leadership in software deployment.	
Damage Detection Using Deep Learning - Automobile Project Link	
[PyTorch / CNN / CUDA / ResNet / Hyperparameter tuning / Data Augmentation / OpenCV / Matplotlib]	Jun 2024 - Aug 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 Using Machine Learning - Finance Project Link	
[Scikit-learn / XGBoost / SMOTE Tomek / Optuna / EDA / Feature Engineering / Data Preprocessing]	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

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