

Poorav Akshay Desai

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EDUCATION

MS in Management Information Systems Texas A&M University – College Station, TX GPA: 3.83/4.0	Aug 2024 – May 2026
MS in Computer Science & Engineering (AI specialization) IIT Delhi – Delhi, India GPA: 3.75/4.0	Jul 2019 – Sep 2021
BS in Computer Engineering L.D. College of Engineering – Gujarat, India GPA: 3.90/4.0	Aug 2014 – May 2018

WORK EXPERIENCE

Technology Modernization Intern Kaspar Companies Inc. Shiner, TX	May 2025 – Jul 2025
<ul style="list-style-type: none">Saved ~40 hours of manual work per month by designing and deploying automation solutions for Finance team, including a digital credit application processing system, using Python Flask, Celery, Redis, MSSQL, and Azure Dockerized deploymentCollaborated with Finance and IT teams to observe workflows, capture pain points, identify inefficiencies, define solution scope, and align stakeholder expectations for impactful automation	
Software Engineer Oracle Cloud Infrastructure Bengaluru, India	Jul 2021 – Aug 2024
<ul style="list-style-type: none">Reduced operational costs by ~30% by designing and implementing a failure-attribution feature that enabled faster root-cause analysis and self-mitigation across OCI's global deployment automation platform (Shepherd), deployed in ~80 regionsBuilt and operated production microservices using Java (Dropwizard) and Oracle DB, deployed via Docker and TerraformImproved platform resiliency by enabling runtime switching of dependency service stacks, preventing cascading failures and avoiding downtime across large portions of OCIDelivered actionable performance insights to leadership by analyzing metrics dashboards and identifying systemic incidents impacting availability and latency in a distributed cloud environment	
Artificial Intelligence Intern Meditab Software India Pvt. Ltd. Gujarat, India	Jul 2018 – Oct 2018
<ul style="list-style-type: none">Developed end-to-end Automatic License Plate Recognition (ALPR) system for parking management and traffic estimation using Python and TensorFlowConducted literature review on deep learning-based object detection and segmentation and implemented preprocessing, training, and evaluation pipelines using OpenCV, Pandas, and NumPy	

PROJECT & RESEARCH

Multimodal Sarcasm Explanation [Paper] [Code] Graduate Student – LCS2 Lab @ IIT Delhi	Aug 2020 – Sep 2021
<ul style="list-style-type: none">Published at AAAI, proposing a novel NLP task to generate natural-language explanations that reveal the intended sarcasm in multimodal social media posts (image + text)Designed and fine-tuned a multimodal Transformer-based architecture combining visual and textual representations, leveraging VGG-19 for image features and BART for text encoding and generationImplemented training and evaluation pipelines using PyTorch and HuggingFace, with data processing via NumPy and Pandas	
DocuChat - Production-Grade RAG-Based Document Chat System	Nov 2025 – Dec 2025
<ul style="list-style-type: none">Developed a scalable RAG pipeline using FastAPI and LangChain, enabling low-latency conversational AI over private documentsEngineered a modular backend supporting plug-and-Play LLM backends (Ollama, OpenAI, Gemini) and vector database (Qdrant), leveraging Design Patterns to ensure system extensibilityArchitected a fault-tolerant ingestion engine with retry logic and distributed task queues (Celery, Redis) to handle high-throughput document ingestion and vector embedding tasksBuilt a modern, responsive frontend with Next.js and Tailwind CSS, implementing real-time streamed AI responses using the Vercel AI SDK for an enhanced user experience	

LEADERSHIP & INVOLVEMENT

- CMIS Student Advisory Board Member: worked with faculty leadership to represent student interests, contribute program feedback, and support academic initiatives and events, including the CMIS AI Conference
- Teaching Assistant for Advanced Data Management and Network & Cloud Infrastructure at Texas A&M University: mentored students and graded assignments

SKILLS

- Backend & Distributed Systems:** Microservices, Distributed Systems, REST APIs, Design Patterns, Asynchronous Programming
- AI / ML:** LLMs, Retrieval-Augmented Generation (RAG), NLP, Deep Learning, Transformers, CNNs
- Languages:** Java, Python, C++, SQL, JavaScript
- Frameworks & Libraries:** LangChain, FastAPI, Flask, Dropwizard, PyTorch, TensorFlow, HuggingFace, Redis, Celery, NumPy, Pandas
- Databases:** MySQL, MSSQL, Oracle DB, MongoDB, Qdrant (Vector DB)
- Cloud / DevOps:** AWS, GCP, OCI, Docker, Kubernetes, Terraform, Git, Shell Scripting
- Frontend:** React, Next.js, Tailwind CSS