Krish Desai

Bachelor of Computer Science | Bachelor of Data Science

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Education

Worcester Polytechnic Institute   Worcester, MA
GPA: 3.73 | Senior | SASE, Sigma Pi   *Expected May 2026*
Relevant Coursework: Algorithms, Applied Statistics, Business Intelligence, Data Mining, Data Science I–III, Database Systems, Probability, Operating Systems, Software Engineering
Awards: Dean's List (x5), Presidential Scholarship

Work Experience

Schneider Electric   Foxboro, MA
Software Engineering Intern   *June – August 2024*

- Developed a Python-based machine learning pipeline using XGBoost to analyze test-report metrics and predict project duration with 86% accuracy.
- Processed and engineered datasets from 100+ test reports, automating data preparation and analysis using Excel VBA macros.
- Reduced manual reporting time and standardized data workflows, improving planning efficiency for R&D engineers.

Projects

Scholarship Web App | Software Engineering **-** CS 3733   *November 2024*

- Built a full-stack scholarship platform using Python, Flask, HTML/CSS, and JavaScript, enabling students to apply for scholarships and donors to manage applications.
- Implemented and tested backend services using Pytest and Selenium; deployed the application to AWS for scalability and reliability.
- Collaborated in a four-person Agile team, participating in code reviews and iterative development cycles.

UFC Fight Prediction Model | Data Science III - DS 3010   *November 2024*

- Built a machine learning pipeline (2010–2024 dataset) using feature engineering and models including Random Forest, KNN, SVM, and Decision Trees to predict fight outcomes.
- Evaluated models using cross-validation and performance metrics to select the most accurate approach.
- Visualized data trends using Matplotlib to guide preprocessing and feature selection.

Multimodal Document Retrieval & Rag System | Major Qualifying Project (MQP)   *August 2025 - Present*

- Developed a multimodal Retrieval-Augmented Generation (RAG) pipeline that performs page-level semantic retrieval over PDFs using a Qdrant vector database and generates grounded summaries with Mistral LLMs.
- Implemented payload-based multitenancy in Qdrant to securely isolate embeddings across tenants, enabling scalable, tenant-aware document search.
- Integrated OCR, embeddings, vector similarity search, and LLM inference to produce context-aware, research-grade outputs for technical documents.

Skills

- **Languages:** Python, Java, C/C++, SQL
- **AI / Data:** Machine learning, NLP, Retrieval-Augmented Generation (RAG)
- **Systems & Tools:** Flask, Docker, AWS, Qdrant, PostgreSQL, Git
- **Testing & Practices:** Pytest, Selenium, Agile