

SAMBHAJI SHINDE

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ABOUT ME

Passionate AI enthusiast with strong expertise in Python, Data Analysis, Machine Learning, and Deep Learning. Skilled in building and optimizing Generative AI solutions, including Retrieval-Augmented Generation (RAG). Eager to leverage technical knowledge and creativity to develop intelligent, real-world AI applications.

EDUCATION

- Artificial Intelligence and Data Science
Maharashtra Institute of Technology
CGPA: 8.9 | (Nov 2022-Present)
- Diploma in Information Technology
Government Polytechnic, Nanded
86.38% | July 2022

ACADEMIC PROJECTS

1. PDF Insights – Generative AI with RAG [[visit](#)]

- Developed a Retrieval-Augmented Generation (RAG) pipeline using LangChain to enable intelligent Q&A over PDF documents.
- Implemented a custom memory-augmented RAG architecture for maintaining conversational context across multiple queries.
- Designed and optimized a unique architecture to enhance accuracy and relevance of responses, going beyond standard RAG implementations.
- Integrated embedding models, vector databases, and conversational memory for a seamless user experience.
- Demonstrated ability to build end-to-end Generative AI solutions, showcasing expertise in LLMs, LangChain, and custom AI pipelines.

2. Natural Language to SQL Assistant (LangChain + Gemini + MySQL) [[visit](#)]

- Built an AI-powered SQL assistant enabling users to query a MySQL database using natural language.
- Integrated LangChain with Google Gemini model to convert user queries into optimized SQL statements.
- Designed an end-to-end pipeline that executes SQL queries, retrieves results, and presents them in a human-readable format.
- Showcased ability to combine LLMs, LangChain, and relational databases to create practical, real-world Generative AI applications.
- Implemented with a focus on accuracy, scalability, and usability for database-driven insights.

3. Bank Marketing Data Analysis (EDA & Insights) [[visit](#)]

- Conducted end-to-end exploratory data analysis (EDA) on 4,500+ customer records to identify key factors influencing term deposit subscription.
- Performed data cleaning, feature engineering, and missing value analysis, ensuring high-quality datasets for further modeling.
- Applied statistical techniques (Chi-square tests, T-tests) and visualizations (histograms, KDE plots, bar charts, heatmaps) to uncover customer behavior patterns.

- Analyzed relationships between demographics, financial attributes, and marketing outcomes, highlighting imbalances and key predictors (e.g., job type, marital status, education, campaign frequency).
- Demonstrated strong skills in Python (Pandas, NumPy, Matplotlib, Seaborn), statistical analysis, and data storytelling for business decision-making.

SKILLS

- **Soft Skills:** Communication, Problem-Solving, Analytical Thinking, Teamwork, Leadership, Management, Adaptability.
- **Hard Skills:** Python, Data Analysis, Machine Learning, Deep Learning, Generative AI, GitHub, LangChain, MySQL, RAG.

ACHIEVEMENTS

- Earned the Warrior and Fledgling Badges from Infosys for exceptional problem-solving skills and consistent progress in foundational tasks.
- Earned IBM badges in EDA for ML, Software Engineering, and Deep Learning, highlighting skills in data analysis, system design, and AI deployment.