

Shanmathy Ravisankaran

AI ENGINEER

Texas, USA | ###-###-#### | @gmail.com | [GitHub](#) | [Portfolio](#)

PROFESSIONAL SUMMARY

AI Engineer with hands-on experience designing ML-ready data pipelines and deploying real-time inference systems using Python, Flask, and SQL. Proven track record of improving data accuracy (25%+) and reducing manual effort through automated data workflows, feature engineering, and intelligent validation frameworks. Experienced in processing large-scale simulation and user-generated data, enabling reliable predictive analytics and faster decision-making. Strong collaborator skilled in building production-ready AI solutions that enhance system performance, scalability, and user insights.

SKILLS

Language & Framework: Python, SQL, FastAPI, REST APIs, Streamlit
Database: DuckDB
Agentic AI Frameworks: LangGraph, LangChain, OpenAI Agents SDK, CrewAI
LLM Engineering: Prompt Engineering, Function Calling, Retrieval-Augmented Generation (RAG), Guardrails
AI Architecture: Multi-Agent Systems, Task Planning, Tool-Augmented Reasoning, AI Workflow Orchestration
Vector & Retrieval Systems: ChromaDB, Embeddings, Semantic Search, Similarity Search, Document Chunking

WORK EXPERIENCE

AI Engineer | Cognizant, USA

Feb 2026 - Present

- Designing and implementing ML-ready data pipelines using Python (Pandas, NumPy) to process simulation experiment data and survey inputs, improving data readiness and feature availability for modeling by 30%.
- Developing and optimizing RESTful backend services using Flask to handle real-time data ingestion and trigger model inference workflows, reducing response latency and improving system throughput.
- Performing advanced data preprocessing, including missing value imputation, encoding categorical variables, and feature scaling on survey and experimental datasets, enabling reliable input for predictive models.
- Building rule-based and ML-assisted validation mechanisms for user inputs, reducing inconsistencies & improving system accuracy by 25%.
- Collaborating with product managers and engineering teams to translate business requirements into measurable KPIs and AI-driven insights, enabling data-backed feature enhancements and decision-making.

Application Development Analyst | Accenture, India

May 2021 - Dec 2023

- Analyzed large-scale telecom operational datasets (millions of records) using SQL and Python, enabling proactive monitoring of network performance, incident patterns, and SLA adherence across multiple regions.
- Designed and delivered enterprise-grade Power BI dashboards using DAX and Power Query, providing real-time visibility into latency, uptime, and defect trends, which improved decision-making speed and reporting efficiency by 30%.
- Engineered end-to-end automation pipelines for data extraction, validation, and reporting using Python and SQL, eliminating manual dependencies and saving 14+ hours per week while improving data accuracy and consistency.
- Led root-cause analysis of critical production incidents by integrating logs, performance metrics, and historical trends, achieving a 95% resolution rate within SLA and significantly reducing recurring issues.
- Partnered with engineering, QA, and operations teams to define scalable KPIs, implement data quality frameworks, and deliver actionable insights, directly contributing to improved system reliability and operational efficiency.

EDUCATION

Master of Science in Information Technology & Management - The University of Texas at Dallas, USA

Bachelor of Engineering in Electronics and Instrumentation Engineering - Anna University, India

PROJECTS

Cosmetic Chemical Intelligence AI Assistant

Jan 2026– Feb 2026

- Built a RAG-based AI assistant that converts cosmetic ingredient datasets into embeddings stored in a Chroma vector database for semantic search.
- Developed a Streamlit interface answering ingredient safety, brand, and product questions using OpenAI embeddings and GPT-4o-mini.
- Implemented data validation, duplicate detection, and explainable outputs for reliable cosmetic safety insights.

SouthStar AI Copilot

Dec 2025– Jan 2026

- Built an internal AI Copilot using Streamlit, LangChain, OpenAI, and Chroma to answer employee policy and compliance questions.
- Developed a document ingestion pipeline that parses PDFs, chunks content, generates embeddings, and retrieves grounded responses.
- Implemented related-question generation, chat session flow, and feedback logging to improve AI response quality.

CERTIFICATIONS

- SnowPro Associate: Platform Certification
- Microsoft Certified: Power BI Data Analyst Associate (PL-300)
- Microsoft Certified: Azure Administrator Associate (AZ-104)
- Microsoft Certified: Azure Fundamentals (AZ-900)