ANAMTA RIZVI

Software Engineer | Agentic AI & Intelligent Systems

rizvianamta4@gmail.com | +1 (862) 256-9028 | Github | LinkedIn

EXPERIENCE

Rutgers University - CARLab, *Software Engineer*   10/2025 – Present
- Developed features for the SWAM BYOC web platform, improving student and research workflows across core modules.
- Delivered AI-driven product features, including a Module Recommender and a Virtual TA, to enable personalized guidance and structured support.
- Worked closely with research stakeholders to ship reliable, production-ready functionality.

Rutgers University, *Research Assistant*   05/2025 – Present
- Built an end-to-end **agent-based system** to automate research tasks, coordinating planning, tool execution, and structured outputs.
- Implemented an LLM-powered **classification system** to categorize papers and extract structured metadata with schema-aware validation.
- Added guardrails and end-to-end trace logging to improve reliability and debuggability across the system.
- Built data ingestion and processing components to support analysis and reporting across structured and unstructured datasets.

Veach AI, *Software Engineer Intern*   09/2025 – 11/2025
- Built an **agent-based system** for market due diligence, automating evidence gathering, signal extraction, and generation of structured decision briefs.
- Designed and integrated retrieval and tool-use capabilities to query curated sources, extract key fields, and produce attributed summaries as part of the core product flow.
- Implemented robustness layers including validation, quality checks, and failure handling to improve system reliability and reduce brittle runs.

EDUCATION

Master's in Information Technology & Analytics, *Rutgers University*   01/2025 – Present
GPA: 4.0/4.0 Coursework: Machine Learning, Data Structures & Algorithms, Big Data and Cloud Computing, Data Mining

SKILLS

Languages: Python, JavaScript, SQL, Java

Agentic AI / LLM: LangGraph, LangChain, tool calling, guardrails, RAG, evaluation, prompt engineering

ML / Data: time-series forecasting, feature engineering, metrics, pandas, NumPy, scikit-learn

Backend: FastAPI, Django, REST APIs

Frontend: React, HTML/CSS, Tailwind

Databases: SQLite/PostgreSQL, FAISS/Milvus (vector), Neo4j(graph)

Cloud/DevOps: AWS (EC2/S3/IAM), Linux, Git, Postman

PROJECTS

Multi-Agent Automation System for Carbon Market Analytics
- Built an end-to-end **multi-agent analytics system** to answer complex questions through planning, tool execution, and verifiable outputs.
- Designed and implemented core system components, including guardrails, parsing, planning, execution, and tracing, to ensure reliable, auditable results; added evaluation and debugging hooks to diagnose and reduce multi-step failures.
Tech: Python, LangGraph/LangChain, tool calling, structured logging, data pipelines

FX Intelligence Platform (Full-Stack + ML Analytics)
- Built an end-to-end **FX analytics platform** for normalization, forecasting, and risk insights, combining backend APIs with an interactive dashboard.
- Integrated and evaluated multiple ML models to generate forecasts and analytics, surfacing metrics and trends to support decision-making.
- Deployed and operated the platform using production-style practices, including configuration management, build/deploy workflows, and reliability troubleshooting.
Tech: Python, FastAPI/Django, React, SQL, AWS (EC2/S3), ML & time-series modeling

Wikipedia RAG + Knowledge Graph QA System
- Built an end-to-end **question-answering system** over a Wikipedia-derived corpus, combining retrieval-augmented generation with citation-grounded responses.
- Integrated a **knowledge graph layer** to model entity relationships and enable structured, graph-guided exploration alongside vector search.
- Improved answer quality and relevance through iterative tuning of chunking, retrieval, and prompts, validated using a representative query set.
Tech: Python, RAG, embeddings, FAISS, Knowledge Graph (Neo4j)

PUBLICATION