Akshar Raikanti

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EDUCATION

Purdue University	**West Lafayette, IN**
B.S., Computer Science	**December 2026**
B.S., Artificial Intelligence	**GPA: 3.62**

Relevant Courses: Analysis of Algorithms, Systems Programming, Artificial Intelligence, Data Structures and Algorithms

Skills: Python, Java, C, C++, C#/.Net, SQL, R, JavaScript, TensorFlow, PyTorch, Relational Databases, NoSQL Databases, Azure, DevOps, Google Cloud (GCP), AWS, Docker, LangChain, LangGraph, Agentic AI, RAG, ML Training, Computer Vision, CI/CD, OpenShift, Jira, Apache, Git

PROFESSIONAL EXPERIENCE

Textron – Textron Systems   **Hunt Valley, MD**
Agentic AI Software Engineer Intern   **August 2025 – December 2025**

- Built an Agentic AI RAG workflow in C#/.NET + Python that ingests docs; tokenizes, generates OpenAI embeddings, and indexes vectors; a decision agent reaches the corresponding team with context and next steps leading to 40% fewer misroutes.
- Launched a ReAct agent in C# that assists shop-floor policy Q&A and actions; applies output validation and self-corrects via tool feedback; added a document-generation tool with file-type selection; reduced supervisor pings ~35%.
- Built a coding assistant with repo-wide embedded search (Azure Cosmos DB vectors + BM25), context-aware completions, and automated test generation; orchestrates unit tests, reducing build to commit time by 25% with adoption by 80+ engineers.
- Trained a bid/no-bid decision engine (RAG on Textron competencies via FAISS + GPT-4o) that 3x screening throughput and cut manual review time by 50%, while preserving high precision on prioritized opportunities with win-probability scoring.

Kohl's – Kohls Technology   **San Francisco, CA**
Software Engineer Intern   **June 2025 – August 2025**

- Engineered a scalable high-performance backend for an ordering platform with RESTful API, leveraging Java Spring Boot, MongoDB, Google Cloud Spanner cloud databases, achieving 10% increase in responsiveness, 5% reduction in load times.
- Built logistics optimization algorithms using predictive modeling replacing SAS Optimization legacy system, boosting efficiency by 15%; analyzed feature adoption metrics using Qlik and BigQuery and presented insights to leadership.
- Developed intuitive frontend interfaces using Angular (TypeScript), enhancing Kohl's order management; modernized CI/CD pipelines using Auto DevOps and container orchestration via Red Hat OpenShift (Kubernetes) accelerating deploys by 5%.

TransSIGHT – Data Consulting Firm   **San Francisco, CA**
Data Engineering and Machine Learning Intern   **June 2024 – August 2024**

- Built & deployed predictive machine learning transit-demand models (Random Forest, XGBoost; scikit-learn, PyTorch), raising forecast accuracy 20% and delivering concise visualizations for faster scheduling/budget decisions.
- Designed an automated end-to-end data pipeline using Apache Airflow, data from AWS S3/Lambda, and leveraged optimized SQL queries, cutting ETL time 30%, improving query performance 10%, and boosting deployment efficiency 15%

RESEARCH EXPERIENCE

BASF – Agricultural Chemical Solutions   **West Lafayette, IN**
Machine Learning Research Intern   **August 2023 – May 2024**

- Developed statistical models and predictive analytics using Python, scikit-learn, XGBoost, and Tableau, enhancing competitor market-share estimation accuracy by 15%, and delivering actionable benchmarking insights to senior management.

PROJECTS

Agentic AI Workflow

- Engineered an agentic Web Search + Retrieval-Augmented Generation (RAG) system on Nvidia NIM (Llama-3.1-8B) using AIQ Toolkit, LangGraph (ReAct/tool-calling), and LangChain; registered a custom Tavily Internet Search Tool and a local-filesystem RAG pipeline (document chunking, embeddings, vector search via FAISS) to deliver fast multi sourced answers to user requests.
- Productionized the agent as a FastAPI + LangGraph microservice (MCP-compatible) with Redis caching, request dedup, and streaming

Local LLM

- Built and deployed a local LLM by fine-tuning a T5 Seq2Seq model on Q&A using Hugging Face Transformers and PyTorch; evaluated with ROUGE metrics, optimized via BitsAndBytes 8-bit quantization, benchmarked latency with custom scripts; served with a secured FastAPI.

Pantry Tracker App

- Built a responsive web app using React and Next.js for real-time pantry item tracking; implemented secure user authentication via Firebase and automated item addition using computer vision with OpenCV.

C++ Shell Implementation

- Implemented a custom Unix-like shell in C++ utilizing Lex and Yacc for command parsing, featuring piping, I/O redirection, background execution, command and process substitution, built-in commands, and robust signal handling with resource management.