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, Databases, NoSQL, Azure, Google Cloud (GCP), AWS, LangChain, LangGraph, Agentic AI, RAG, Vector Database Search, ML Training, Computer Vision, Docker, 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# + Python that ingests docs; tokenizes, generates and indexes OpenAI embeddings; decision agent reaches the right team with context leading to 40% fewer misroutes using Microsoft Semantic Kernel.
- 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 by 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.
- Engineered a data ingestion pipeline using Azure Data Factory, Databricks, and Python to aggregate, embed, and vectorize data from diverse internal sources, enabling efficient Agent powered knowledge lookup.

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 and deployed predictive machine learning transit-demand models (Random Forest, XGBoost; scikit-learn, PyTorch) and designed an automated end-to-end data pipeline using Apache Airflow, AWS S3/Lambda, raising forecast accuracy by 20%.

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.

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 and delivering actionable benchmarking insights to senior management leading to stronger business strategy decisions.