Saksham Adhikari

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Education

Texas State University ***San Marcos, TX***

B. Sci. Computer Information Systems with AI concentration ***GPA****: 4.0* *Expected May 2027*

- **Relevant Coursework**: Object Oriented Programming, Data Structures and Algorithms, Computer Data Base Systems, AWS Educate Introduction to Generative AI, Informations Systems (Database)

Experience

Breast Cancer Research Center *March. 2025 – Present*

Software Engineering Intern *Austin, TX*

- Engineered a hybrid knowledge base for a breast cancer chatbot, integrating Qdrant for semantic search and TiDB for keyword retrieval across **1,000+** caregiver transcripts
- Deployed a Rust-based agentic search system via the llama-nexus inference gateway, utilizing the Modal Context Protocol (MCP) to improve factual accuracy by over **90%**.
- Currently containerizing the full-stack application with Docker for streamlined deployment and scalable inference on BCRC production servers

Translational Health Research Lab *Jan. 2025 – Present*

Undergraduate Data Researcher *San Marcos, TX*

- Engineered a HIPAA-compliant Python NLP pipeline to analyze **500+** patient interactions, enabling secure sentiment analysis to uncover biases and track its impact on patient mental health for a grant-funded AI project
- Utilized Python and Google's BERT language model for sentiment analysis, identifying **5** key negative tone indicators to track psychometric impact on longitudinal patient health outcomes
- Processed **30k+** longitudinal patient interaction data points (from **500** patients) using Pandas and PostgreSQL (SQL), reducing data processing time by **40%** while ensuring efficient, scalable, HIPAA-compliant handling for research
- Contributed key findings to a peer-reviewed research paper(**currently in press**) linking stigmatizing sentiment in early patient interactions (15.6% incidence) to long-term health outcomes as part of a HIPAA-compliant NLP analysis

Projects

Shivoham *(Github) |Python, Hugging Face API, Gemini, Node.js* *May. 2025 – Present*

- Architected a Python ingestion pipeline using PyMuPDF and targeted LLM API calls to deconstruct grant solicitation PDFs into structured JSON objects, automating the extraction of **15+** critical data points saving **50+** hours of work
- Developed a "Dream Team" assembly engine in FastAPI (Node.js/Python) that applies a greedy algorithm to automate **95%** of the team selection process, analyzing **6,542** potential team configurations per grant
- Engineered a "Red Team" rule based agent which analyzes the proposed team against the full structured solicitation to identify the single biggest proposal weaknesses to simulate reviewers critiques

Find&Fund *(Github) |Python, Hugging Face API, SQLite, Flask* *Nov. 2024 – Present*

- Developed a proposal coach using Python and a finetuned Llama model, resulting in **3** successful in-state grant awards for PhD students in a **14**-person pilot group
- Generated tailored proposal feedback by fine-tuning a language model with Low-Rank Adaptation (LoRA) on a corpus of **70+** grant proposals (**63** successful: **7** unsuccessful), creating lightweight adapters to guide proposal structure and format
- Engineered a data ingestion system with Flask and SQLite, automating the conversion of varied proposals into structured JSON to enable efficient processing and analysis by the core AI model

Obvius *(Github) |AWS AppSync, Google Maps API, Google Gemini, React* *Aug. 2024 – Oct. 2024*

- Engineered a full-stack application that helped users with dynamic suggestions (e.g., date spots, study locations) based on mood, preferences, date/time, and real-time availability.
- Achieved **8k+** user adoption in Week 1 via a responsive React UI (Replit), delivering **10+** categories of AI-powered location recommendations.

Leadership and Extra Curriculars

ACM AI @ TXST - Vice President *Jan. 2024 – Present*

- Led AI/ML workshops for **50+** members on topics including Claude computer use, MCPs, led Kaggle competitions and hackathon club teams, significantly boosting AI skills; organized industry speaker events and carpools
- Helped in engineering and deploying an ML professor recommendation bot for the club discord channel, achieving an **87%** positive feedback rate across **484** interactions.
- First place - TXST Datathon, 3rd Place - Rowdy Datathon, Best Design- Hack a Cat

Technical Skills

Languages: Python, Rust, Java, SQL (PostgresSQL and mySQL), Typescript, HTML/CSS, C++, DAX
Tools: Spring Boot, Postman, Git, GitHub, Docker, Jenkins, AWS S3, SageMaker, EC2