

Gaurab Chhetri

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SUMMARY

Undergraduate researcher and full-stack engineer building AI systems and OSS tools; first-author and co-author on multiple papers with several preprints, including CognitiveSky accepted for HICSS-59, and an active GitHub with many projects.

EDUCATION

Bachelor of Science in Computer Science

Texas State University, GPA: 4.0 — President's List (Fall 2024 – Spring 2025)

San Marcos, TX

Expected May 2028

SKILLS

Languages: TypeScript, JavaScript, Python, C/C++, SQL, R

AI/ML: PyTorch, Transformers (Hugging Face), scikit-learn, TF-IDF, NMF

Frameworks: React, Next.js, Node.js, Express, LangChain, Streamlit, Tailwind CSS

Tools/Databases: PostgreSQL, MongoDB, Supabase, Docker, Git, Linux, CI/CD, GitHub Actions

EXPERIENCE

Undergraduate Research Assistant

AIT Lab, Texas State University

San Marcos, TX

Oct 2024 – Present

- Engineered and deployed **25+ data-driven web tools** for AI and transportation research, processing **150k+** mobility and crash records with reproducible pipelines in Python and JavaScript.
- Implemented ML workflows for crash analytics and safety prediction, contributing to **5+ published papers**.
- Developed and optimized the AIT Lab website (Next.js + Tailwind), achieving **90+ Lighthouse** performance and SEO scores.

PROJECTS

CognitiveSky — github.com/gauravfs-14/CognitiveSky

Research Project

- Accepted for **presentation at HICSS-59 (2026)**. Built an end-to-end system for analyzing mental health narratives on Bluesky using Node.js, Python, and Transformers integrated with a Next.js dashboard.
- Automated 24x7 ingestion and labeling via GitHub Actions, applying sentiment, emotion, and topic modeling to generate interactive JSON-based summaries.

Adaptly — github.com/gauravfs-14/adaptly

Open Source Library

- Created a TypeScript-based AI-adaptive UI library that turns natural-language commands into live React layouts using an LLM-driven planner integrated with Next.js and Tailwind.
- Implemented a Cmd+K command palette and adaptive layout engine supporting OpenAI, Anthropic, and Gemini models for real-time interface recomposition; **published as an open-source package**.

MedGuide AI — github.com/gauravfs-14/medguide-ai

Hackathon Project

- Built a privacy-first medical assistant that interprets health documents via LangGraph agents, local embeddings (Ollama), and a retrieval-augmented Streamlit interface; **winner of the Organized AI Hackathon, Austin, TX**.
- Used the Model Context Protocol (MCP) for memory, PDF parsing (PyMuPDF), and semantic search with ChromaDB, deployed in Docker for secure offline use.

VidXiv — github.com/gauravfs-14/vidxiv

Personal Project

- Developed a Streamlit app that converts arXiv papers into narrated videos using Gemini for summarization, TTS for narration, and MoviePy for visual rendering.
- Added multi-scene generation, portrait/landscape support, and background music to create polished, YouTube-ready educational content; **used for paper stories at AIT Lab**, Texas State University.

HONORS AND AWARDS

Hackathon Wins

Won 3+ hackathons since 2024, building projects like RUMI, ResQMe, MedGuide AI.

Austin/ San Marcos, TX

2024 – Present

Undergraduate Research Fellowship

\$2k Quanta Services grant for AI-based heat-stress prediction research.

Texas State University

Mar 2025