# Gaurab Chhetri

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## SKILLS

Languages: TypeScript, JavaScript, Python, C/C++, SQL, R, HTML, CSS, PHP

Web/Backend: Next.js, React, Node.js, Express, REST; DB: MySQL, MongoDB, SQLite; Tools: Docker, Linux, Git, Neovim

Data/ML/Viz: pandas, numpy, scikit-learn, Hugging Face (Transformers), R (ggplot2, Shiny), D3.js, Leaflet.js

Additional: SEO, CLI tooling, WordPress, Domain management, Prompt engineering, CI/CD

## **PROJECTS**

## CognitiveSky (github.com/gauravfs-14/cognitivesky)

Research Project

Node.js, Python, Hugging Face (Transformers), React

May 2025 - Aug 2025

• Engineered an end-to-end Bluesky Firehose pipeline with batched NLP labeling for sentiment, emotion, and topics, and delivered a Next.js research dashboard with Turso-backed snapshots; accepted for presentation at **HICSS 2026**.

#### CrashTransformer (github.com/gauravfs-14/crashtransformer)

Research Project

Python, Hugging Face (Transformers), Next.js

Jul 2025 – Aug 2025

 Developed a transformer-based workflow for narrative summarization and severity inference across 150k+ police reports with reproducible evaluation and open documentation; submitted to IJCNLP 2025 and TRBAM 2026.

#### Bhanai Programming Language (npmjs.com/package/bhanai)

Personal Project

Node.js, CLI Tools

Jan 2021 - Feb 2021

• Published a Nepali-style interpreted language that executes . bhn files via chalau, supporting variables, conditionals (yadi...aru), comments, lists, and objects under the MIT license, reaching early adoption among hobbyist developers.

#### ComputeNepal (computenepal.com)

Open Source

WordPress, SEO, Open Source

May 2021 - Present

• Founded an education platform with **200+ articles** and expanded reach to **50k+ monthly impressions** through technical SEO and open source learning tools, including Learn C, JS Challenges, Learn HTML, and Quiz.

### Research Dashboards and Tools (github.com/gauravfs-14)

Research Project

Next.js, Leaflet.js, TypeScript

Oct 2024 – Present

• Delivered **25+** interactive dashboards with filtering, clustering, overlays, and responsive UI in Next.js and Leaflet, ingesting CSV, SQLite, and API sources to support research and policy analysis.

#### **EXPERIENCE**

#### **Undergraduate Research Assistant**

San Marcos, TX

AIT Lab @ Texas State University

Oct 2024 - Present

- Produced **25+ analytical and visualization tools** across internal and open source contexts, processed **150k+** mobility and crash records, and standardized AI in transportation workflows with reproducible pipelines.
- Co-authored **5+ manuscripts** published or online with **10+** additional submissions in progress, contributing methods, analysis, modeling, quality control, and documentation in Python, R, and JavaScript.
- Designed the AIT Lab website in Next.js and Tailwind, deployed on Vercel, and achieved **90+ Lighthouse** SEO and performance scores across publications, projects, team, and resources sections.

#### HONORS & AWARDS

#### **Hackathon Wins**

Austin & San Marcos, TX

HackaCat Nano 2024, RiverHacks 2025, Organized AI Hackathon 2025

Aug 2024 – Present

• Secured **3 of 4 hackathons wins** since 2024, building projects such as *RUMI* (AI roommate finder), *ResQMe* (AI emergency response system), and *MedGuide AI* (medical assistant with LangGraph and RAG).

## **Undergraduate Research Fellowship**

Texas State University

Competitive Research Fellowship

Mar 2025

• Awarded \$2,000 in Quanta Services funding to lead an independent research project on heat stress prediction.

#### **EDUCATION**

## **Bachelor of Science in Computer Science**

San Marcos, TX

Texas State University (GPA: 4.0) — Dean's List (Fall 2024 – Present)

Expected May 2028

· Coursework: Data Structures, Algorithms, Assembly Language, Discrete Math, Probability & Statistics, Calculus