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, GitHub Actions

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.

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 × 2, Organized AI Hackathon 2025 — *Aug 2024 – Present*
- Secured **4 of 5 hackathon wins** since 2024, building projects such as ***RUMI*** (AI roommate finder), ***ResQMe*** (AI emergency response system), ***MedGuide AI*** (medical assistant with LangGraph and RAG), and ***Beyond Blue*** (AI/ML exoplanet exploration platform).

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