

Sugam Panthi

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Education

The University of Southern Mississippi (Honors College)
Bachelors in Computer Science (4.0 GPA)

Hattiesburg, MS
Graduating Year: 2028

Technical Skills

Languages: Go, Python, C/C++, HTML, CSS, JS

Technologies: Gin, PyTorch, Docker, Tmux, Flask, Git, Linux, Node, React, Tailwind

Experience

UG Research Assistant, The University of Southern Mississippi

November 2024 – Present

- Utilized data analysis, visualization, and LSTM-based predictive modeling on plastic waste in the US; authored methodologies and results for two journal submissions.
- Built a React Native app connecting farmers and recycling plants for efficient plastic waste transport using Clerk, MongoDB, and Mapbox.
- Built an AI-powered educational chatbot using NextJS, React by fine-tuning AI model and utilizing vector database for semantic search.

Tech Intern, Best One Network

February 2024 – May 2024

- Enhanced the payment confirmation API by transitioning from Django to FlaskWSGI, optimizing processing and improving scalability.
- Identified, reported, and solved 2 critical bugs during the testing phase, leading to a 10% reduction in post-deployment issues.

Honors and Publications

- Hackathon: Second Place**, Davidson College January 2025
- Hackathon: First Place**, The University of Southern Mississippi November 2024
- Paper:** A Comprehensive Review of Plastic Recycling in Construction Industry: Challenges and Opportunities in the U.S.

Projects

Deepseek-Go, Team (GitHub)

- Lead maintainer for the most popular API client for Deepseek in Go with 250+ stars; closed 30+ issues, 15+ PRs.
- Implemented test-driven development for production, CI/CD actions with GitHub Actions, and semantic versioning.
- Developed a custom JSON extractor, token expenditure estimator, and added support for multiple conversations.

NomNom - AI-Powered File Renaming CLI (GitHub)

- Created a powerful Go CLI tool for intelligent bulk file renaming using AI and Image Vision.
- Implemented parallel processing for AI operations and file handling, with support for multiple file types including PDFs, images, videos.
- Designed comprehensive logging system with revert capabilities and safe file operations.
- Added optimized smart content analysis with OCR support, extensive configuration, and automatic file organization.

Ripple - 3D Gamified Flashcards, Team (GitHub)

- Developed a web application for creating, playing, and sharing flashcards in 3D, enhancing study experiences.
- Engineered with a Next.js frontend and Go backend, deployed on Cloud Run with Firebase for database storage.
- Utilized Turborepo for monorepo management, incorporating OCR using Tesseract, text-to-speech using OpenAI.

Cohesion - AI-Based SQL Assistant, Team (GitHub)

- Developed an AI-powered open-source web application for SQL schema generation; won the hackathon.
- Engineered a custom speed-focused CSV format for mock data analysis, enhancing performance by 200%.
- Created a backend DB testing system using Go, Gin, and Docker for optimized testing and benchmarking.

Danime - A Discord Bot, Team (GitHub)

- Collaborated with 3 developers to build an open-source Discord bot with server management tools.
- Verified by Discord; 1,000,000+ users and 2,000,000+ API calls.
- Utilized Python, Discord API, Flask, MongoDB, and Git.