





MANDIP ADHIKARI

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EDUCATION

The University Of Southern Mississippi

Bachelor of Science in Computer Science (GPA: 4.00, Honors Scholar)

Expected Graduation: **May 2027**

Hattiesburg, MS

Relevant Coursework:

Data Structures and Algorithms, Linear Algebra, Secure Software Development, Database Management System Design

TECHNICAL SKILLS

Languages: Javascript, Typescript, Python, C, C++, C#, SQL, PHP, HTML, CSS, Latex

Web Technologies: React, Next.js, Express, TailwindCSS, Git, Docker, AWS, Prisma, Redis, Supabase, PostGres

Other: Project Management, Agile Methodologies

EXPERIENCE

Institute for Advanced Analytics and Security

February 2025 - Present

Research Assistant, Software Developer

USM

- Improved data parsing and metadata evaluation pipelines in **Python** that increased data ingestion efficiency by **30%**, allowing for the successful enrichment of a MongoDB database with **10 million** records.
- Implemented a modular visualization system for an agentic **LangGraph** chatbot, enabling natural language queries to generate interactive data visualizations in API ready and embeddable formats, reducing development time for data-driven applications by **60%**.
- Developed a visualization engine with **Plotly** and **Matplotlib** integration, increasing user engagement by **35%** through interactive chart generation from conversational queries, while supporting **5+** visualization types across **4+** output formats.

Office of Institutional Effectiveness

February 2024 - January 2025

Data Specialist

USM

- Analyzed and restructured degree requirements for **50+** undergraduate programs into a comprehensive spreadsheet format, streamlining data analysis and enhancing curricular insight.
- Digitized **500+** faculty transcripts, creating a searchable database to enhance data accessibility and analytics.
- Coordinated and evaluated critical data for SACSCOC accreditation reports, ensuring **100%** accuracy with a **6+** member team.

PROJECTS

Enygma

December 2024 - Present

Full Stack Developer

- Created a sequential puzzle challenge platform with an integrated admin dashboard using **Next.js** & **TypeScript** featuring users management with real-time security alerts, reducing manual interventions by **50%**.
- Implemented robust anti-cheat measures, such as device fingerprinting, automated attempt detection, and suspicious activity monitoring algorithm to maintain fair gameplay, reducing automated cheating attempts by **85%**.
- Designed a scalable data architecture with **PostgreSQL** and **Prisma ORM**, ensuring seamless real-time progress tracking and maintaining **sub-50ms** response times under high concurrency.

ezi

November 2024 - Present

Full Stack Developer

- Spearheaded development of an AI task management web application, integrating automated scheduling and summarization features; achieved a **95%** accuracy rate in task categorization for the initial user cohort.
- Integrated intelligent time-estimation and categorization features that optimize task workflows and auto-generate calendars from email and Canvas data, boosting overall user productivity by **40%**.

Ottomail

August 2024 - Present

Full Stack Developer

- Led a comprehensive frontend redesign, utilizing **React** and **Tailwind CSS**, resulting in a **40%** improvement in user interface responsiveness and a **25%** increase in user engagement.
- Contributed to backend development using **Python**, **FastAPI**, and **AWS Lambda**, implementing a vector database capable of processing **10,000+** emails per day, enabling AI-generated replies with **95%** contextual accuracy and reducing response time by **60%**.

HONORS & CLUBS

Software Dev Lead

Full-ride Scholarship

1st-Runnerup, ENBCC

Google Developer Student Club at USM

Awarded with **Honors College Presidential Scholarship** at USM.

1st-Runner up in the Nepal's first virtual **national business case competition** by Seedlings Nepal.

October 2023 - Present

August 2023 - May 2027

November 2021