





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:

Calculus with Analytic Geometry, Data Structures and Algorithms, Linear Algebra, Secure Software Development

TECHNICAL SKILLS

Languages: Javascript, Typescript, Python, 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

- Developed robust data parsing and metadata evaluation pipelines in **Python** to manage and enrich a large-scale **MongoDB** database, supporting comprehensive coverage of NOAA missions and affiliated organizations.
- Engineered an agentic AI chatbot leveraging **LangGraph** and **GraphRAG** to enable efficient querying and dynamic interaction with an extensive NOAA mission database, significantly improving user accessibility.
- Collaborated with a cross-functional team to implement scalable backend solutions, enhancing data integrity and meta-data ingestion.

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

- Developed 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.

eZl

November 2024 - Present

Full Stack Developer

- Engineered an agentic **AI-powered** student productivity web application with **Langchain**, **Next.js** & **FastAPI** to automatically ingest tasks from Outlook and Canvas, summarize action items, and dynamically schedule them, reducing manual planning efforts by more than **70%**.
- 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

- Spearheaded 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%**.

TrashTalk

November 2023

Team Lead, Full Stack Developer

- Collaborated on the creation of an **AI model** trained on a dataset of **25,000+** images, resulting in an accuracy of **90%** for the waste identification system.
- Developed a website using **React** and **TailwindCSS** with real-time video analysis, reducing user waste sorting time by **50%**.

HONORS & CLUBS

Software Dev Lead

Google Developer Student Club at USM

October 2023 - Present

Full-ride Scholarship

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

August 2023 - May 2027

1st-Runnerup, ENBCC

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

November 2021

competition conducted by Seedlings Nepal.