


# Saleep Shrestha

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## EDUCATION

### The University of Southern Mississippi (USM), Hattiesburg, MS

August 2023 - May 2027

Bachelor of Science in Computer Science, Honors Discovery Scholar, 3x Presidents List

GPA: 4.00/4.00

Relevant Courses: Data Structures and Algorithm, Design for Defense (DS4D), Computer Systems

## PROJECTS

**Exium** December 2024  
Co-founder, Developer [Github Link](#)

- Developed a React-based coding exam platform with integrated Monaco Editor and Judge0 API, achieving 99.9% uptime and enabling real-time execution for 100+ concurrent users
- Pitched project to USM Hatchery Foundation judges, securing \$500 seed funding by demonstrating anti-cheat browser lockdown features and scalable Docker deployment
- Collaborated with back-end developers to reduce operational costs by 30% via Google Cloud optimization

**Sudoku Solver** December 2024  
Lead Developer [Github Link](#)

- Implemented a C++17-based Sudoku solver reducing average puzzle solution time by 60% by using a Ternary Search Tree algorithm for optimized backtracking and real-time conflict detection
- Designed a modern Qt6-based, dark-themed GUI increasing user engagement by 25% through intuitive input validation, dynamic feedback, and streamlined puzzle navigation

**Manimator** November 2024  
Front-end Developer [Github Link](#)

- Developed a React front-end for an AI-powered math animation tool, boosting UI responsiveness by 60% using lazy loading and optimized state management
- Integrated Flask APIs with OpenAI GPT-4 to generate Manim code from prompts, enhancing tutoring session engagement by 40%

**HealthCheck** November 2024  
Lead Developer [Github Link](#)

- Implemented a multilingual medical checklist web app improving patient/family procedure adherence by 20% by integrating OpenAI-based translation APIs and TTS features

**Trading Bot for S&P 500 Stocks** September 2024  
Founder

- Developed a Python-based trading bot that improved buy/sell signal accuracy by 15% by integrating MACD, RSI, and Volume Moving Averages on 500+ S&P stocks using yfinance and pandas
- Automated trading notifications reducing manual monitoring time by 100% via Twilio and SMTP APIs

## EXPERIENCE

**School of Computing Sciences and Engineering, USM** Present  
Undergraduate Research Assistant [Hattiesburg, MS](#)

- Enhanced phishing detection research improving dataset accuracy by 10% by preprocessing and analyzing 1,000+ email samples with predictive modeling techniques in Python
- Contributed to a 5 person research team accelerating project timelines by 15% through data cleaning, feature engineering, and automation scripts

**Housing and Residence Life, USM** Present  
Resident Assistant [Hattiesburg, MS](#)

- Managed a community of 40+ residents increasing engagement by 25% by organizing monthly tech workshops, Q&A sessions, and social events that fostered a supportive living environment

**Google Developer Student Clubs (GDSC)** Present  
Member [Hattiesburg, MS](#)

- Developed a Python-based web scraping project improving data extraction efficiency by 10% by deploying BeautifulSoup and REST APIs to automate collection from a manga website
- Collaborated with a 50+ developer community driving solution ideation for real-world problems by using Google Cloud tools and open-source technologies

## TECHNICAL SKILLS

**Languages:** Python, C++, C#, JavaScript C, R, SQL

**Tools & Frameworks:** Pandas, Numpy, Matplotlib, Seaborn, Scikit-Learn, Tensorflow, Open AI API, BeautifulSoup

**Concepts:** Machine Learning, Regression Analysis, Quantitative Data Modeling, Geospatial Analysis

**Additional Skills:** Multilingual Support Integration, REST APIs, Data Visualization, Data Scraping