

Pappu Jha

Hattiesburg, MS | jhapappu7165@gmail.com | pappu.jha@usm.edu

Portfolio | LinkedIn | GitHub | Google Scholar

Education

Bachelor of Science in Computer Science Minor in Economic Data Analysis & Honors Keystone Scholar The University of Southern Mississippi (USM) – Hattiesburg, Mississippi	Aug 2023 – May 2027 GPA: 4.0/4.0
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Applicable Coursework: Statistics, Data Structures and Algorithms, Software Development Foundations

Skills

Programming: Python, C++, Object Oriented Programming (OOP), API

Web Development: HTML, CSS, JavaScript, WordPress

Artificial Intelligence: Machine Learning Classification & Regression, Supervised Algorithms (Random Forest, Logistic Regression, Naive Bayes), Data Analysis (Pandas, NumPy), Visualization (Seaborn, Matplotlib)

Information Technology: MS Office (Excel, PowerPoint, Access), Slack, Google Workspace, Cloud Services, Content Management System (CMS), GitHub, Database (MongoDB), SQL

Spoken Languages: English, Nepali, Maithili (Native), Hindi

Work Experiences

Information Technology Intern, Jones Capital – Hattiesburg, MS	Sept 2023 – Present
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- Providing technical support for **Jira Service Management** by configuring service management systems and automating workflows, enhancing response time and service efficiency.
- Maintaining **documentation** using **Confluence** to support knowledge sharing on **AI tools** and **IT systems**, improving onboarding and troubleshooting for both customers and staff.

Research Assistant, Institute for Advanced Analytics and Security – Hattiesburg, MS	May 2023 – Present
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- Built and published **AQUAVIEW**, a Python library exposing more than 7 API endpoints for streamlined access to oceanographic data for **NOAA (National Oceanic and Atmospheric Administration)**.
- Analyzed **2M+ big data** from 125 years of **World Ocean Database**, generated their **metadata**, indexed in **Google Cloud**, and integrated into the **UI**, contributing to NOAA's **software development**.
- Developed an **LLM-powered classification tool** to assign Platform IDs for Uncrewed Marine Systems using **metadata**, streamlining NOAA's operation across 10+ data sources.

Web Developer, Roy Howard Community Journalism Center – Hattiesburg, MS	Oct 2024 – May 2025
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- Designed and maintained the organization's **website** using **SNO WordPress**, boosting user engagement by 30% through improved **UI/UX**.
- Optimized **Search Engine Optimization (SEO)** by indexing webpages, resulting in an increase in site traffic on **Google Search Console**.

Learning Assistant, USM Comparative Religion Course – Hattiesburg, MS	Aug 2024 – May 2025
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- Facilitated group work for mutual learning, increasing student participation by 40% during teamwork.
- Collected and provided feedback to the instructor on student experiences, addressing 30% more student concerns over the semester.

Research Experience

Undergraduate Research Assistant (Volunteer), Cyber Innovation Lab	Sept 2024 – Present
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- Led two cybersecurity research projects using machine learning in collaboration with faculty and mentors, resulting in an presentation at the **SEDE 2025 conference**, and **1st place** at the **USM Research Symposium**.
- Authored scientific papers summarizing literature reviews, data analyses, model development, and evaluations

to address real-world cybersecurity threats.

Creative Projects

Boston Daddy <i>Hack Harvard 2025, Harvard University</i>	Link	Oct 2025
• Developed a full-stack smart city infrastructure platform that integrated energy, traffic, and weather data — achieving predictive analytics and actionable insights for 15+ buildings and 10+ intersections in real-time.		
Delagent <i>MHacks 2025, University of Michigan</i>	Link	Sept 2025
• Built an AI-based scheduling platform using Fetch.AI uAgents framework, FastAPI, and SQLite , resulting in automated 3-agent calendar coordination and negotiation with 80% reduction in manual scheduling overhead.		
Regulating College Dormitories Digitally Using C++ <i>Advisor: Mr. Rick Loggins, USM Faculty Member</i>	Link	Nov 2023
• Built a dormitory management back-end system using all concepts from the introductory C++ course, streamlining student check-ins/outs and visitor logs, reducing manual tracking effort by 60%.		
• Integrated rule enforcement features to automatically flag dorm violations, improving housing compliance oversight of 500+ students.		

Publication & Presentation

Conference Proceeding

- Jha, P., Hamid, H., Olukola, O., Dahal, A., & Rahimi, N. (2026). *Adversarial Machine Learning for Robust Password Strength Estimation*. In: Rahimi, N., Margapuri, V., & Golilarz, N.A. (Eds.) *Software and Data Engineering. SEDE 2025*. Communications in Computer and Information Science, vol. 2720. Springer, Cham. https://doi.org/10.1007/978-3-032-08649-5_18

Presentations

- TEDx Southern Miss 2025 – AI For Ocean Health (Oct 2025)
- USM Undergraduate Symposium on Research & Creative Activity (UGS) – **First Place** (Computational Approaches), Adversarial Machine Learning on Robust Password Strength Estimation (Apr 2025)

Leadership Experiences

Creative Director , The Entrepreneurship Society, USM	Apr 2025 – Present
• Conducted marketing of the organization via social media, mass emailing, and distributing flyers, increasing the membership to more than 40 in a week.	
International Ambassador/Mentor , USM Center for International Education	Dec 2023 – Present
• Supported 100+ international students by managing pre-arrival communication on Unibuddy and on-site onboarding to ensure a smooth transition to the United States.	
Director of Finance , USM Residence Hall Association	Apr 2024 – May 2025
• Formulated budgets for 8+ RHA events with 1000+ attendees, coordinating with board members and advisors to ensure successful execution and efficient resource allocation.	

Honors

USM President's Lists : Fall 2023, Spring 2024, Fall 2024, and Spring 2025	Aug 2023 – May 2025
Honors Keystone Scholarship , USM Honors College	Aug 2025
International Ambassador of the Year , USM Center for International Education	Apr 2025
Innovation & Excellence Award , Roy Howard Community Journalism Center, USM	Apr 2025
Academic Excellence Scholarship , The University of Southern Mississippi	Aug 2023