

# Pappu Jha

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Portfolio | LinkedIn | GitHub | Google Scholar

## Education

<b>Bachelor of Science in Computer Science</b> <b>Minor in Economic Data Analysis &amp; Honors Keystone Scholar</b> 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, Atlassian (JIRA, Confluence)

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

## Work Experiences

<b>Information Technology Intern, Jones Capital</b> – Hattiesburg, MS	Sept 2023 – Present
<ul style="list-style-type: none"><li>Built interactive <b>data-driven performance dashboards</b> in <b>Jira Service Management</b> and <b>Excel</b> to track ticket resolution metrics of around 10 agents, improving executive reporting efficiency by 25%.</li><li>Automated <b>data workflows</b> and created custom <b>JQL filters</b> and <b>Confluence documentation</b>, reducing manual reporting time of IT support operations by 30%.</li></ul>	

<b>Research Assistant, Institute for Advanced Analytics and Security</b> – Hattiesburg, MS	May 2023 – Present
<ul style="list-style-type: none"><li>Built and published <b>AQUAVIEW</b>, a Python library exposing more than 7 API endpoints for streamlined access to oceanographic data for <b>NOAA (National Oceanic and Atmospheric Administration)</b>.</li><li>Analyzed <b>2M+ big data</b> from 125 years of <b>World Ocean Database</b>, generated their <b>metadata</b>, indexed in <b>Google Cloud</b>, and integrated into the <b>UI</b>, contributing to NOAA's <b>software development</b>.</li><li>Developed an <b>LLM-powered classification tool</b> to assign Platform IDs for Uncrewed Marine Systems using <b>metadata</b>, streamlining NOAA's operation across 10+ data sources.</li></ul>	

<b>Web Developer, Roy Howard Community Journalism Center</b> – Hattiesburg, MS	Oct 2024 – May 2025
<ul style="list-style-type: none"><li>Designed and maintained the organization's <b>website</b> using <b>SNO WordPress</b>, boosting user engagement by 30% through improved <b>UI/UX</b>.</li><li>Optimized <b>Search Engine Optimization (SEO)</b> by indexing webpages, resulting in an increase in site traffic on <b>Google Search Console</b>.</li></ul>	

<b>Learning Assistant, USM Comparative Religion Course</b> – Hattiesburg, MS	Aug 2024 – May 2025
<ul style="list-style-type: none"><li>Facilitated group work for mutual learning, increasing student participation by 40% during teamwork.</li><li>Collected and provided feedback to the instructor on student experiences, addressing 30% more student concerns over the semester.</li></ul>	

## Research Experience

<b>Undergraduate Research Assistant (Volunteer), Cyber Innovation Lab</b>	Sept 2024 – Present
<ul style="list-style-type: none"><li>Led two cybersecurity research projects using machine learning in collaboration with faculty and mentors, resulting in an presentation at the <b>SEDE 2025 conference</b>, and <b>1st place</b> at the <b>USM Research Symposium</b>.</li><li>Authored scientific papers summarizing literature reviews, data analyses, model development, and evaluations</li></ul>	

to address real-world cybersecurity threats.

## Creative Projects

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<b>Boston Daddy</b> <i>Hack Harvard 2025, Harvard University</i>	<a href="#">Link</a>	<b>Oct 2025</b>
• Developed a <b>full-stack</b> 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.		
<b>Delagent</b> <i>MHacks 2025, University of Michigan</i>	<a href="#">Link</a>	<b>Sept 2025</b>
• Built an AI-based scheduling platform using <b>Fetch.AI uAgents framework, FastAPI, and SQLite</b> , resulting in automated 3-agent calendar coordination and negotiation with 80% reduction in manual scheduling overhead.		
<b>Regulating College Dormitories Digitally Using C++</b> <i>Advisor: Mr. Rick Loggins, USM Faculty Member</i>	<a href="#">Link</a>	<b>Nov 2023</b>
• 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

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### 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](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

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

## Honors

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