

# Pappu Jha

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Portfolio | LinkedIn | GitHub | Google Scholar

## Education

**Bachelor of Science in Computer Science** **Aug 2023 – May 2027**  
**Minor in Economic Data Analysis & Honors Keystone Scholar** **GPA: 4.0/4.0**  
The University of Southern Mississippi (USM) – Hattiesburg, Mississippi  
**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

**Information Technology Intern, Jones Capital – Hattiesburg, MS** **Sept 2025 – Present**

- Built interactive **data-driven performance dashboards** in **Jira Service Management** and **Excel** to track ticket resolution metrics of around 10 agents, improving executive reporting efficiency by 25%.
- Automated **data workflows** and created custom **JQL filters** and **Confluence documentation**, reducing manual reporting time of IT support operations by 30%.

**Research Assistant, Institute for Advanced Analytics and Security – Hattiesburg, MS** **May 2025 – Present**

- 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**

- 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**

- 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**

- 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

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### Boston Daddy

Hack Harvard 2025, Harvard University

[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

MHacks 2025, University of Michigan

[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++

Advisor: Mr. Rick Loggins, USM Faculty Member

[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

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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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### 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

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### 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