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

Work Experiences

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

- Designed and modified 10+ automation workflows in **Jira Service Management (JSM)** across over 8 portfolio companies, reducing service request resolution time by 25% and aligning delivery with **SLA** targets.
- Built 30+ dynamic gadgets in JSM and **Excel** using **JQL filters** to monitor real-time performance of 5 IT agents, resulting in a 30% increase in team efficiency and improved KPI tracking.
- Developed 5 **automation pipelines** in **n8n**, created 20+ pages of process **documentation** in **Confluence**, and published 5 **Scribe** tutorials, reducing manual reporting time by 40%.
- Resolved 10+ field-level discrepancies in more than **2000 JSM work items** of all time by troubleshooting, leading to a **100%** reduction in recurring ticket errors in the following weeks.

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

- Built **AQUAVIEW**, a Python library exposing more than 7 API endpoints for streamlined access to oceanographic data for NOAA (National Oceanic and Atmospheric Administration), downloaded over **1000 times**.
- Processed **17M+ data** from **125 years** of the **World Ocean Database**, generated metadata in MongoDB, indexed in Cloud, and integrated into the UI via Elastic Search, contributing to the NOAA's AQUAVIEW project.
- Enhanced the user interface of World Ocean Database to handle **edge cases**, including invalid date ranges and out-of-bound latitude/longitude values, improving overall user experience.
- Developed an **LLM**-powered **classification tool** to assign Platform IDs for Uncrewed Marine Systems using metadata in real-time, streamlining NOAA's platform designation across **20M+ data points** in **10+ sources**.
- Created an adapter for the **National Data Buoy Center (NDBC)** historical and real-time data from inactive and active stations, enabling easy access to over **30 years** of NDBC datasets.

Web Developer, Roy Howard Community Journalism Center – Hattiesburg, MS   **Oct 2024 – May 2025**

- Developed and maintained the organization's content-heavy website using **WordPress (SNO CMS)**, improving user engagement by **35%** through targeted UI/UX redesign and responsive layouts.
- Enhanced visibility by optimizing **SEO metadata**, improving page load speed by **40%**, and indexing high-traffic pages on **Google Search Console**.
- Collaborated with editorial and tech teams to ensure site performance, troubleshoot errors, and publish timely content updates, ensuring **99.9% uptime**.

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 a presentation at the **SEDE 2025 conference**, and **1st place** at the **USM Research Symposium**.

Creative Projects

Boston Daddy   Link
Hack Harvard 2025, Harvard University   **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 Link
MHacks 2025, University of Michigan **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++ Link
Advisor: Mr. Rick Loggins, USM Faculty Member **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 category), Adversarial Machine Learning on Robust Password Strength Estimation (Apr 2025)

Skills

Programming: Python, C++, OOP, API, SQL, 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: Atlassian (Jira Service Management, Confluence), n8n, Scribe, Microsoft 365 tools, Cloud Services, GitHub, Database (MongoDB), SharePoint, Microsoft Teams, OneDrive

Leadership Experiences

Creative Director, The Entrepreneurship Society, USM **Aug 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, Spring 2025, & Fall 2025	**Aug 2023 – Dec 2025**
Honors Keystone Scholarship, USM Honors College	**Aug 2025 - May 2027**
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 - May 2027**