Pappu Jha

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Education

The University of Southern Mississippi (USM) · **Aug 2023 – Dec 2026**
- BS in Computer Science (Major) and Economic Data Analysis (Minor) · **GPA: 4.0/4.0**
- **Relevant Coursework:** Data Structures & Algorithms (DSA), Software Development Foundations, Operating Systems, Intro to Programming I (Python) and II (C++), Cyber Law & Ethics, Differential Equations, Statistics
- **Honors:** USM President's List, International Ambassador of the Year, Innovation & Excellence Award

Skills

Programming: Python, C++, SQL, HTML, CSS, C#, WordPress, Object Oriented Programming (OOP)

Machine Learning: Literature Review, Data Collection, Data Analysis (Pandas, NumPy), Preprocessing, Visualization (Seaborn, Matplotlib), and Classification (Random Forest, Logistic Regression, Naive Bayes)

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

Projects

Adversarial Machine Learning for Robust Password Strength Estimation · Link
Advisor: Dr. Nick Rahimi, USM Assistant Professor · **Sept 2024 – April 2025**
- Developed machine learning models using adversarial training and classification algorithms to estimate password strength, increasing classification accuracy by 20%.
- Conducted literature review across 10 peer-reviewed papers to identify vulnerabilities in current password strength meters.
- **Tools Used:** Machine Learning (Random Forest, Logistic Regression, Naive Bayes, Decision Tree, XGBoost)

Investigating the Impact of Virtual Reality on Education · Link
Advisor: Dr. Partha Sengupta, USM Assistant Teaching Professor · **Aug 2024 – Sept 2024**
- Led a 6-member research team and authored 60% of a paper on VR in education for submission in conference.
- Conducted literature review on educational VR using 15+ scholarly sources, developing research skills.
- **Skills Used:** Literature Review, Scientific Paper Writing, Team Leadership, Communication, Time management

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.
- **Tools Used:** C++ (Object-Oriented Programming, File Handling, Vectors, and Other Advanced Level Concepts)

Experience

Undergraduate Student Researcher, Cyber Innovation Lab – Hattiesburg, MS · **Sept 2024 – Present**
- Collaborated on an adversarial machine learning research project focused on improving password strength estimation, increasing accuracy by up to 20%.
- Contributed to the lab's technical documentation and prepared findings for presentation and publication opportunities.

Web Producer, Roy Howard Community Journalism Center – Hattiesburg, MS · **Oct 2024 – Present**
- Designed and maintained the organization's website using SNO WordPress, boosting user engagement by 30% through improved layout, interactive content, and streamlined navigation.

- Integrated legal content such as privacy policies and terms of use to ensure legal compliance of the website.
- Optimized website SEO using targeted keywords and images, resulting in a 30% increase in site traffic on Google Analytics.

Learning Assistant, USM Comparative Religion Course – Hattiesburg, MS   **Aug 2024 – Present**
- 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.
- Served as a liaison between students and the professor, improving students' course satisfaction by 40%.

Computer Science Tutor, Trinity International College – Kathmandu, Nepal   **Sept 2022 – July 2023**
- Taught Python programming in high school classes, boosting coding proficiency by 60% in final project.
- Implemented coding exercises, resulting in a 30% increase in completion rates for coding assignments.

Data Analyst Intern, Kuhiro Class – Kathmandu, Nepal   **Dec 2022 – July 2023**
- Collected and analyzed contact information for A-level schools in South Asia using Excel, acquiring 100 first customers through targeted marketing.
- Published environmental articles for the organization's journal, increasing website readership by 25% through increased content visibility.

Leadership

Director of Finance, USM Residence Hall Association – Hattiesburg, MS   **Apr 2024 – July 2025**
- Formulated the budget for RHA events, ensuring effective allocation of financial resources.
- Coordinated with board members and advisors, overseeing the planning, execution, and debriefing of all events, and boosting attendance by 15% over the year.

Student Ambassador, International Student & Scholar Services – Hattiesburg, MS   **Dec 2023 – Present**
- Assisted over 50 new international students with check-ins, campus tours, and job search, ensuring a smooth transition to campus life.
- Shared campus life info with 100+ prospective students via social media, supporting informed decision-making.