

# Suman Yadav

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## Summary

Aspiring Data Scientist with strong foundations in Machine Learning, Data Analysis, and Web Development. Proven success in delivering accurate ML models and scalable web platforms. Passionate about solving real-world problems using data-driven solutions.

## Education

**University of Louisiana, Monroe, LA** Monroe, Louisiana  
Bachelor of Computer Science, GPA: 3.45 May 2027  
**Relevant Coursework:** Data Structure and Algorithms, OOPS, Internet Programming, Advanced Discrete Structures, Calculus, Statistics and probability

## Experience

**Startups Realm Technology** Lalitpur, Nepal  
Intern May 2023 – Aug 2023

- Built and deployed responsive user interfaces with HTML, CSS, and JavaScript, improving engagement by 20% across 10 platforms.
- Streamlined team collaboration and version control by maintaining code integrity with Git for 15 developers.

## Extracurricular Activity

**BookShare | ULM Hackathon** April-2025

- Enabled 50+ daily book uploads by building a responsive book-sharing platform with AI-powered pricing suggestions for 1000+ users.
- Boosted reading engagement by 10% via a personalized recommendation engine and 'Read More' UI preview.
- Enhanced backend speed by optimizing database queries and efficiently managing 500+ book/user records.

## Projects

**Car Sales Price Prediction** June 2025

- Developed a Random Forest regression model that predicted used car prices within a  $\pm 8\%$  error margin on structured vehicle data, improving pricing reliability.
- Automated preprocessing pipeline (handling missing values, encoding categorical features, scaling) using pandas and scikit-learn, reducing manual intervention.
- Optimized performance via GridSearchCV and cross-validation, improving model F1-score by 18% and boosting robustness.

**Heart Diseases Project.** June 2025

- Built a medical ML system achieving 92% recall in early detection of heart disease using patient clinical data.
- Performed EDA and feature engineering (outlier detection, cholesterol/ECG trend analysis) to improve feature reliability.
- Benchmarked models (Logistic Regression, KNN, Random Forest) and visualized results with ROC-AUC, confusion matrix, and SHAP for interpretability.

**CNN-horse-vs-human** July 2025

- Trained a Convolutional Neural Network (CNN) with TensorFlow/Keras to classify images of horses' vs humans.
- Improved model robustness using data augmentation and dropout regularization, achieving >90% accuracy.
- Demonstrated scalable CV workflows, including dataset preprocessing, training, and evaluation pipelines.

**Sarcasm Detector** July 2025

- Developed a sarcasm classification model leveraging semantic embeddings and deep NLP architectures.
- Preprocessed and tokenized raw text data, optimizing embedding layers for contextual understanding.
- Evaluated with F1-score and ROC-AUC, achieving reliable detection of nuanced sarcastic language.

**MNIST digit recognizer** August 2025

- Built an interactive TensorFlow.js web app with a CNN model achieving 97% digit recognition accuracy, enabling real-time predictions from user-drawn inputs.
- Showcased deep learning + deployment by integrating CNN-based digit recognition directly into the browser.
- Designed a responsive UI with real-time feedback, demonstrating full-stack ML deployment skills.

## Skills

**Languages:** Python, Java, JavaScript, MySQL

**ML & Data Science:** TensorFlow, Scikit-Learn, pyTorch, NumPy, Pandas, Matplotlib, Seaborn

**Web Development:** React, HTML, CSS, Tailwind CSS

**Tools:** Jupyter Notebook, Google Colab, Git, GitHub