Laxmi Narayan Sharma

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Education

B.Tech in Information Technology (Minor in Economics), Indian Institute of Information Technology (IIIT), Allahabad July 2022 - June 2026
CGPA: 9.2/10 (as of 4th Year)
Secured **99.4 percentile** in JEE Mains 2022 (Top 0.6% nationally)

Experience

ASPR AGROVALUE (I) LIMITED — Data Science Intern Dec 2024 - Feb 2025

- Cleaned and preprocessed large-scale agricultural datasets, resolving inconsistencies and handling missing values to improve data quality for downstream modeling.
- Tackled imbalanced datasets using techniques like SMOTE and stratified sampling, improving model generalization for harvest yield prediction.
- Conducted comprehensive exploratory data analysis (EDA) on weather and soil data using Python (Pandas, Seaborn, Matplotlib) to extract actionable insights.
- Engineered domain-specific features from weather data (e.g., rainfall patterns, temperature shifts, humidity windows) to boost predictive model performance.
- Collaborated with AI team to support development of crop forecasting models, enabling more accurate harvest planning and data-driven decision making.

Projects

Production-Ready MLOPS Pipeline with Docker and AWS [GitHub link - 🔗]

- Built a complete ML pipeline using Pytorch, covering **data ingestion, validation, transformation, training, evaluation, and prediction**.
- Containerized the application with **Docker** and deployed a Flask-based inference system on **AWS Free Tier (EC2)** for basic-scale access and demonstration.
- Achieved a **0.45 mean absolute error** and **0.85 R-squared** on **1,600+ samples**, showcasing robust model performance.
- Demonstrated end-to-end MLOps readiness with reproducible workflow and cloud deployment.

AI-Powered Multilingual Clinical Interview Chatbot [GitHub link - 🔗]
Challenge: Limited access to clinical interviews due to language barriers.
Outcome:
- Architected multilingual NLP pipelines with Langchain and FAISS, spanning 5+ languages, to amplify clinical reach.
- Fused symptom extraction and automated reporting, securing 89% precision.

Recommender-System-Content-Based-Filtering [GitHub link - 🔗]
Challenge: Accurately recommend items based on user preferences and item feature similarities.
Outcome:
- Implemented a content-based recommender system using user and item feature vectors.
- Represented items using feature-tag vectors (e.g., genre, author/actor, year, price) and user preferences via profile vectors.
- Used cosine similarity/dot product between user and item vectors to compute relevance scores.
- Personalized recommendations were generated by ranking items with the highest similarity scores.

Technical Skills

- **Programming Languages:** Python, C++
- **AI & Machine Learning:**PyTorch, Scikit-learn, Langchain, Regression, Classification, PCA, Random Forest
- **Data Analysis & Visualization:** NumPy, Pandas
- **Tools & Technologies:** Docker, Git, MySQL

Related Coursework

Data Structures and Algorithms | Object Oriented Methodologies | Operating System | Database Management System | Machine Learning | Artificial Intelligence | Data Mining | Generative AI | Data Visualization | Cybersecurity

Volunteer Experience

Overall Coordinator - Robita Club (Generative AI), IIIT Allahabad Jan 2023 – June 2025

- Spearheaded a **10+** member team to execute **3+** AI initiatives with PyTorch, orchestrating hands-on workshops.

Achievements

- Secured **99.4 percentile** in JEE Mains 2022, ranking in the top **0.6%** nationwide.
- Completed Options 101 course by Akuna Capital, mastering foundational options trading concepts [Link - 🔗].