# 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: 7.51/10 (as of 3rd Year)

Secured **99.4 percentile** in JEE Mains 2022 (Top 0.6% nationally)

## Experience

#### ASPR AGROVALUE — AI Intern

Dec 2024 - Feb 2025

- Enhanced Qwen-1.5B model through LoRA fine-tuning on Google Cloud Vertex AI, reaching 85% accuracy in farmer procurement predictions, leading to a 20% reduction in wasted resources.
- Built agentic AI system for real-time data scraping/processing (1,000+ records/day), improving operational efficiency by 30%.
- Integrated RAG with ensemble models (XGBoost/Random Forest) using 5+ data sources to enhance prediction reliability.
- Engineered a Named Entity Recognition (NER) system using Python and NLP techniques (RAG, SLMs); system automated extraction of key data points, processing 10,000+ documents monthly with 95% accuracy.

## Projects

#### 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 via TensorFlow, securing 89% precision.

#### Movie Magic [GitHub link - %]

Challenge: Personalized movie recommendations based on user preferences.

Outcome:

- Developed a KNN model on 5,000+ IMDB records using scikit-learn, generating 2,000+ monthly recommendations.
- Integrated search bar with advanced filters, increasing user browsing time by 20% and boosting satisfaction.

#### Federated Learning for Image Classification on Raspberry Pi [GitHub link - %]

Challenge: Distributed model training on low-power devices.

Outcome:

- Trained MobileNetV2 via federated learning on 2+ Raspberry Pi clients using 500+ images.
- Achieved 92% accuracy and 80% server load reduction; deployed model on Edge Impulse.

#### End-to-End Wine Quality Prediction Pipeline [GitHub link - %]

Challenge: Subjective quality evaluation through manual tasting.

Outcome:

- Crafted an ML pipeline with TensorFlow, yielding a **0.45 mean absolute error** and **0.85 R-squared** across **1,600**+ samples.
- Streamlined access for 50+ users by deploying a Flask application on AWS, accelerating usability by 30%.

#### Technical Skills

- Programming Languages: Python, C++
- AI & Machine Learning: TensorFlow, PyTorch, Scikit-learn, Langchain, Regression, Classification, PCA, Random Forest,
  XGBoost
- Data Analysis & Visualization: NumPy, Pandas
- Tools & Technologies: Google Cloud Platform (Vertex AI), Docker, Git, Unix/Linux, TCP/IP

#### 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

 $Jan\ 2023 - June\ 2025$ 

ullet Spearheaded a  ${f 10+}$  member team to execute  ${f 3+}$  AI initiatives with PyTorch, orchestrating hands-on workshops.

Coordinator - Rangtarangini (Drama Club), IIIT Allahabad

Jan 2023 - June 2025

• Orchestrated large-scale cultural events for 1,000+ attendees, ensuring seamless delivery.

# Achievements

- Secured 99.4 percentile in JEE Mains 2022, ranking in the top 0.6% nationwide.
- Achieved Codeforces Specialist (rating 1534) and LeetCode 1900+ in C++.
- Completed Options 101 course by Akuna Capital, mastering foundational options trading concepts [Link %].