Akash Deep Kumar

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Portfolio — GitHub — Live Application

Professional Summary

Final-year Computer Science Engineering student specializing in Machine Learning and Explainable AI with hands-on experience in building and deploying data-driven applications. Strong in Python, model evaluation, and interpretable ML systems, with live project deployments and research-oriented implementation experience.

Technical Skills

Programming Languages: Python, C, C++
Machine Learning: Classification, Model Evaluation, Explainable AI (SHAP)
Libraries and Frameworks: NumPy, Pandas, Scikit-learn, SHAP, Streamlit
Databases & Querying: MySQL, SQL
Tools and Platforms: Git, GitHub, Streamlit Cloud
Core Concepts: Data Structures, Object-Oriented Programming, Operating Systems, DBMS

Certifications

Machine Learning Basics – Sungkyunkwan University (Coursera), Jan 2026
Covered core machine learning concepts including data preparation, classification models, performance evaluation, and practical ML workflows.

Projects

Lymphography Disease Prediction
Python, KNN, Decision Tree, Random Forest, SHAP

- Developed an end-to-end machine learning system for disease prediction using lymphography data.
- Trained and evaluated multiple classification models for comparative analysis.
- Applied SHAP explainability to interpret feature importance and improve model transparency.
- Used stratified cross-validation and multiple evaluation metrics for robust performance analysis.

Daily Sugar Guidance Web Application
Python, Streamlit, GitHub, Streamlit Cloud

- Built and deployed a real-time health guidance web application based on blood sugar inputs.
- Implemented safe input validation, alert handling, and rule-based recommendations.
- Designed simple, visual outputs suitable for diverse user literacy levels.

Publications and Presentations

Explainable AI based Lymphography Disease Prediction
Accepted for presentation at an IEEE-affiliated conference; paper under publication.

Education

Bachelor of Technology in Computer Science and Engineering
University of Engineering and Management, Jaipur   2022 – 2026
CGPA: 7.4

Senior Secondary (Class XII), 2022: 76%