Uday Kukreja

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Education

VIT Bhopal University Bhopal, Madhya Pradesh Cumulative GPA: 7.82/10
BTech Expected May 2025
Major in Computer Science; Minors in Artificial Intelligence and Machine Learning

Technical Skills

Languages: Java (Advanced), Python, SQL |**Concepts:** Machine Learning, Deep Learning, Data Structures & Algorithms, NLP|**Libraries/Frameworks:** NumPy, Pandas, Scikit-learn, TensorFlow, Keras, Matplotlib

Projects

Cancer Detection Using AI and Machine Learning **ML Based System** **Oct 2024 – April 2025**
Tech Stack: Python, Scikit-learn, TensorFlow, OpenCV, Flask

- Developed and deployed multiple ML models (Random Forest, XGBoost, Logistic Regression, CNN) to detect cancer types using over 4,000 medical images and health records.
- Conducted in-depth feature analysis and hyperparameter tuning to enhance model accuracy to 96%.
- Designed an end-to-end pipeline for image preprocessing, data balancing, model training, and real-time predictions.
- Evaluated model performance using ROC-AUC, confusion matrix, and cross-validation.
- Presented research findings in a university seminar and documented the methodology in a detailed report.

Integrating Machine Learning for Multiple Disease Prediction **ML Based System** **May 2024 – June 2024.**
Tech Stack: Python, Scikit-learn, Pandas, NumPy, Tkinter

- Built a disease diagnosis system leveraging classification techniques (Decision Trees, SVMs, Naive Bayes) for conditions such as heart disease, diabetes, and Parkinson's.
- Utilized Kaggle datasets and performed feature engineering and one-hot encoding to handle categorical attributes.
- Developed a lightweight UI interface for patient data input and prediction output.
- Achieved a 91% overall accuracy and visualized results using confusion matrices and bar graphs.
- Published a GitHub repository with code, data, and deployment documentation.

Integrating Machine Learning for Advanced Rainfall Forecasting **ML Based System** **Oct 2023 – Nov 2023**
Tech Stack: Python, Keras, TensorFlow, Pandas, Matplotlib

- Built LSTM and GRU-based models to predict rainfall trends using satellite imagery, time-series weather data, and climate archives.
- Preprocessed large datasets, handled missing values, normalized data, and conducted feature extraction using PCA.
- Compared traditional models (ARIMA, SVR) with deep models for performance benchmarking.
- Integrated the model with a visual dashboard for weather visualization and trend prediction.
- This project was presented in the university tech fest and nominated for best research solution.

Extracurricular

- **Sports:** participated in district and state level tournaments in lawn tennis and soft tennis.
- **Leadership:** Led a team of 20 student council members, fostering collaboration and effective communication.
- **Event Management:** Organized and executed successful school events, increasing student engagement and participation.

Additional

Languages: Languages: Hindi (Native), English (Fluent), Sindhi (Conversational) – Participated in 10+ technical debates and authored 10+ project reports, consistently praised for clear and precise communication