G AJAY KUMAR

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SUMMARY

Motivated and detail-oriented BSc Computer Science graduate with strong passion for AI & ML. Proficient in data preprocessing, model training, evaluation, and API-based deployment using FastAPI. Expertise in Machine learning, Deep learning and Natural Language Processing. Strong Skills in SQL, Scikit-learn, TensorFlow, and Keras. Experienced in building real-world projects, including diabetes risk prediction and sentiment analysis.

TECHNICAL SKILLS

Programming: Python, SQL
ML Frameworks & Libraries:

- **Data:** NumPy, Pandas, Matplotlib, Seaborn
- **Modeling:** Scikit-learn, XGBoost, LightGBM, TensorFlow/Keras
- **Core NLP:** NLTK

Deployment: FastAPI
Tools & Databases: Git, GitHub, Visual Studio Code, Jupyter Notebook, MySQL

PROJECTS

Diabetes Risk Prediction system | Python, SQL, Scikit-learn (Source Code)

- Developed a predictive model to assess diabetes risk using a **PIMA** dataset (768 records, 8 features).
- Performed data extraction, data querying, cleaning, and exploratory data analysis using SQL and Python.
- Trained Logistic Regression and Random Forest models with train-test-split and feature scaling.
- Achieved 79% test accuracy and compared model performance using precision, recall and confusion matrix
- Deployed the trained model using FastAPI and exposed REST endpoints for real-time predictions.
- Tested API endpoints using JSON inputs to serve predictions programmatically.

Sentiment Analysis using LSTM | TensorFlow, Keras, NLP (Source Code)

- Developed an end-to-end deep learning model to classify text as positive or negative.
- Performed **NLP text preprocessing** including tokenization, padding and sequence encoding.
- Designed an **LSTM-based** architecture with **Embedding layers** to capture Long-term contextual dependencies.
- Trained & Evaluated model performance using validation and test datasets, achieving ~88% test accuracy.
- Deployed the trained deep learning model using FastAPI and built inference endpoints for sentiment analysis.

EDUCATION

DR. BRR Govt. Degree College **Nov 2021 – July 2024**
Bachelor of Science in Computer Science

CERTIFICATIONS

Python for Data Science, AI & Development - Coursera (IBM), 2025
Data Analysis with Python - Coursera (IBM), 2025
Machine Learning with Python - Coursera (IBM), 2025
Introduction to Deep Learning & Neural networks - Coursera (IBM), 2025