MOTUPALLI JYOTHI SWAROOP

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Skills Summary:

Skilled in analyzing large datasets, extracting insights, and developing end-to-end machine learning models with Python (NumPy, Pandas, Matplotlib, Seaborn) and SQL. Experienced in building interactive dashboards, reports, and data visualizations to support stakeholders in data-driven decision-making. Collaborated cross-functionally to ensure data quality and deliver actionable recommendations. Additionally, have hands-on expertise in **Generative AI**, including working with LLMs, prompt engineering, fine-tuning, and text generation using OpenAI and Hugging Face.

EDUCATION :

Master of computer applications (MCA) **(2022-2024)**

(University college of science, saifabad, OU)

CGPA:8.20

Bachelor Of Science (MPC) **(2019-2022)**

(Sardar Patel Degree College, Secunderabad)

CGPA:8.57

Technical SKILLS :

- **Python & ML Tools:** NumPy, Pandas, Scikit-Learn; data visualization with Matplotlib & Seaborn.
- **Statistics & Math:** Hypothesis testing, ANOVA, probability, linear algebra.
- **Machine Learning:** Regression, Decision Trees, Random Forest, SVM, KNN, Naïve Bayes, XGBoost, AdaBoost, Lasso/Ridge, model tuning & evaluation.
- **Deep Learning:** ANN, CNN, RNN with TensorFlow .
- **Generative AI:** Hands-on with LLMs, prompt engineering, fine-tuning, and text generation using OpenAI & Hugging Face.
- **SQL:** Database design, queries, and DBMS concepts.
- **NLP:** Text preprocessing, vectorization (BoW, TF-IDF, Word2Vec) with NLTK**.**
- **Data Tools:** Advanced Excel (dashboards, pivot tables), Power BI (DAX, data modeling, reporting).
- **Version Control:** Git & GitHub for source code and collaboration.

PROJECTS:

Hotel_Booking_Prediction
Machine Learning | Flask | Scikit-learn | Pandas | HTML

- Built an ML model using Flask to predict student performance with **80% accuracy** using Random Forest.
- Designed an end-to-end pipeline (data ingestion, preprocessing, training, evaluation) for seamless deployment.
- Integrated real-time prediction interface and used pickle/joblib for model deployment.
- Applied GridSearchCV for hyperparameter tuning to improve model performance.
  GitHub: https://github.com/jyothiswaroop-09/Hotel_Booking-prediction.git

Titanic Survival Prediction (Kaggle Dataset)
Machine Learning | Classification | Python | Scikit-learn | Pandas | Matplotlib | Seaborn

- Built a classification model on the Titanic dataset with **80–85% accuracy** through EDA, feature engineering, and model evaluation.
- Handled missing data with imputation, encoded categorical features, and engineered features like FamilySize, Title, and IsAlone.
- Trained multiple models (Logistic Regression, Decision Trees, Random Forest, XGBoost) and optimized with GridSearchCV & cross-validation.
- Visualized survival trends and exported the final model with joblib/pickle for deployment.
  GitHub: https://github.com/jyothiswaroop-09/Titanic-prediction.git

Cat_vs_Dog_Classification
Machine Learning | TensorFlow/Keras | CNN | OpenCV | Python

- Built a CNN model to classify **cats and dogs**, achieving high accuracy on the dataset.
- Performed data preprocessing including resizing, normalization, and augmentation to improve model performance.
- Designed an end-to-end pipeline for training, validation, and evaluation.
- Implemented optimization techniques like dropout, batch normalization, and early stopping to prevent overfitting.
  GitHub: https://github.com/jyothiswaroop-09/CNN_-Deep-Learning.git

Identification Of Human Movements Using Deep Learning

- Used high-memory GPUs to handle video datasets with preprocessing (resizing, normalization), boosting accuracy by **20%**.
- Built a video-to-action pipeline with **OpenCV, NumPy, TensorFlow**.
- Explored HAR methods, taxonomy, and challenges; showcased applications in surveillance, sports, and HCI.
- Future goal: develop context-aware recognition for complex activities (e.g., cooking, reading).
- **Tech Stack**: Python, TensorFlow/Keras, OpenCV, NumPy

R&D:

- **Predictive Modeling**: Built and tuned ML models with Scikit-learn, achieving **90%+ accuracy** for business decisions.
- **Data Pipelines**: Automated workflows with Pandas & NumPy, cutting processing time by **30%**.
- **Data Visualization**: Created dashboards with Matplotlib & Seaborn for actionable insights.
- **EDA & Insights**: Uncovered trends that improved outcomes by **25%** through data-driven strategies.
- **Projects**: Showcased end-to-end Data Science & ML projects& Deep Learning

CERTIFICATIONS:

- Data Visualization Certified By Forage (TATA GROUP)
- Microsoft Office By (SET WIN)
- Full Stack Data Science Certification- VERSION IT