

MOTUPALLI JYOTHI SWAROOP

EMAIL: swaroop.motupalli@gmail.com

Mobile: +91 9553885915

LinkedIn: <https://www.linkedin.com/in/jyothi-swaroop-278084338>

Skills Summary:

- Proficient in analyzing large datasets, identifying trends, and generating actionable insights.
- Expanded and deployed machine learning models based on requirement.
- Strong experience in Python (NumPy, Pandas, Matplotlib, Seaborn) and SQL for data extraction, manipulation, and analysis.
- Collaborated with team to understand cross-functionally needs and provided data-driven recommendations that enhanced decision-making processes.
- Utilized data visualization tools (matplotlib, seaborn with Python) to create informative dashboards and reports for stakeholders, resulting in improved data accessibility and comprehension.
- Participated in data analysis projects and data engineering tasks to ensure data quality and availability for analysis.

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:** Built regression/classification models using NumPy, Pandas, Scikit-Learn; visualized data with Matplotlib & Seaborn.
- **Statistics & Math:** Proficient in hypothesis testing, ANOVA, probability, chi-squared, t/z-tests, linear algebra, calculus.
- **Machine Learning:** Hands-on with Regression, Decision Trees, Random Forest, SVM, KNN, Naïve Bayes, XGBoost, AdaBoost, Lasso/Ridge, model tuning & evaluation (AUC, ROC, RMSE, CV).
- **Deep Learning:** Experienced with ANN, CNN, RNN using TensorFlow & Pytorch.
- **SQL:** Strong database design & query writing, with solid grasp of DBMS principles.
- **NLP:** Text Preprocessing (tokenization, Lemmatization, POS Tagging), vectorization (Bow, TF-IDF, Word Embeddings(Word2VEC)) using NLTK
- **Advanced Excel:** Skilled in data cleaning, pivot tables, lookup functions, charts, and dashboard creation.
- **Power BI:** Experienced in building interactive dashboards, DAX functions, data modeling, and business reporting.
- **Version Control & Collaboration:** Proficient with Git for source code management and GitHub for version control, issue tracking, and project collaboration.

PROJECTS:

Hotel_Booking_Prediction Web App

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

- Developed a web-based ML application to predict student performance based on demographics and prior scores using a cleaned dataset.
- Built end-to-end pipeline including data ingestion, preprocessing, model training (with classifiers like Random Forest, CatBoost), and evaluation.
- Integrated a Flask web interface to allow users to input data and get real-time predictions.
- Applied GridSearchCV for hyperparameter tuning and used serialization (pickle/joblib) for model deployment.
- Followed modular architecture with separate scripts for ingestion, transformation, training, and inference for maintainability.

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** to predict passenger survival using the Titanic dataset by performing thorough EDA, feature engineering, and model evaluation.
- Handled missing data (e.g., Age, Cabin) using imputation techniques and encoded categorical features using one-hot and label encoding.
- Engineered new features like FamilySize, Title, and IsAlone to enhance model accuracy.
- Trained and evaluated multiple classification algorithms including Logistic Regression, Decision Trees, Random Forest, and XGBoost.
- Improved model performance using GridSearchCV and cross-validation, achieving an accuracy of ~80–85% on test data.
- Visualized survival trends with plots (heatmaps, histograms, pair plots) to interpret feature influence on survival.
- Exported the final model using joblib/pickle for deployment or inference.

GitHub: <https://github.com/jyothiswaroop-09/Titanic-prediction.git>

Identification Of Human Movements Using Deep Learning

- Required high-memory GPUs for handling video datasets.
- Applied frame preprocessing (resizing, normalization) for model compatibility.
- Improved model accuracy by 20% through preprocessing.
- Built an efficient video-to-action pipeline using OpenCV, NumPy, and TensorFlow.
- Reviewed HAR methods, taxonomy, and data challenges.
- Demonstrated AI applications in surveillance, sports, and HCI.
- Future goal: context-aware recognition of complex activities (e.g., cooking, reading).

 **Tech Stack:** Python, TensorFlow/Keras, OpenCV, NumPy

ACHIEVEMENTS:

- **Predictive Modeling Expertise:**
 - ✓ Built and fine-tuned Machine Learning models using Scikit-learn, achieving over 90% accuracy in predict analytics for business-critical decisions.
- **Optimized Data Processing Pipelines:**
 - ✓ Enhanced data handling workflows by developing automated pipelines using Pandas and NumPy, reducing processing time by 30% for large datasets.
- **Innovative Data Visualizations:**
 - ✓ Designed intuitive dashboards with Matplotlib and Seaborn, enabling stakeholders to identify actionable insights and trends at a glance.
- **Impactful Data Insights:**
 - ✓ Conducted exploratory data analysis (EDA) that uncovered key trends and patterns, leading to a 25% improvement in business outcomes through data-driven strategies.

- **Project's Portfolio:** Showcased end-to-end Data Science and Machine Learning projects on **GitHub:** <https://github.com/jyothiswaroop-09>

CERTIFICATIONS:

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