ARAVIND BETHAPUDI

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OBJECTIVE

Aspiring Data Scientist with a strong background in Python programming, machine learning, and data visualization. Eager to apply my expertise in statistical analysis and data modeling to solve complex business problems and drive data-driven decision-making in a dynamic environment.

EDUCATION

- **Master's in data science, University of North Texas**
  Aug 2022 - May 2024
  Relevant Coursework: Applied Machine Learning, Fundamentals of Data Science, Data Visualization.

- **Bachelor of Technology, Indian Institute of Technology, Varanasi**
  July 2017 - May 2021

SKILLS

- **Software & Tools:** Google Colab, Rapid Miner, GitHub, MS Excel.
- **Big Data Technologies**: SQL and relational database.
- **Programming Languages:** Python.
- **Machine Learning**: Supervised (Linear Regression, Logistic Regression, Decision Tree), Support Vector Machines, K-nearest neighbors, Annoy, Auto Encoders.
- **Machine Learning Tools/Libraries:** TensorFlow, sci-kit-learn.
- **Statistics:** Statistical Analysis, Data Interpretation, Data Modeling and Forecasting.
- **Soft Skills:** Communication Skills, Collaboration, communication skills, Leadership, Time Management, problem-solving, Teamwork, Proactive.

CERTIFICATIONS

- **Data Science Professional Certificate**, IBM.
- **Machine Learning with Python**, IBM.
- **Data Visualization,** IBM.
- **SQL with Python**, IBM.
- **Data Analysis with Python**, IBM.

PROJECTS

SpaceX Falcon 9 First Stage Landing Prediction (GitHub Link**)** **Jan 2024 – May 2024**

- **Description:** Developed a machine learning model to predict the landing success of SpaceX Falcon 9 first stages.
- **Responsibilities:**
  - Collected and preprocessed SpaceX launch data.
  - Engineered features and handled missing values to prepare the dataset.
  - Implemented various machine learning models including Logistic Regression, SVM, Decision Trees, and KNN.
  - Evaluated model performance using metrics such as accuracy and confusion matrices.
  - Visualized the results with interactive charts to identify success patterns.
- **Technologies:** Python, pandas, sci-kit-learn, Plotly, Google Colab.
- **Impact:** Improved the accuracy of predicting Falcon 9 landing success, aiding in mission planning and risk assessment.

- **Model Performance:**
  Test Data Accuracy:
  Decision tree Classifier: 0.8889, **Logistic Regression:** 0.8333, **SVM:** 0.8333
  Based on the above analysis, the Decision Tree Classifier is recommended for its superior test accuracy.

Used Cars Recommendation System using AutoEncoders (GitHub Link**)** **Dec 2024 – April 2024**

- **Description:** Developed a recommendation system for used cars using Denoising Autoencoders and Approximate Nearest Neighbors.
- **Responsibilities:**
  - Collected and preprocessed dataset with 66 features.
  - Conducted EDA to uncover data patterns.
  - Implemented Denoising AutoEncoders for robust car attribute representation.
  - Used ANN for similarity search to recommend top 6 related cars.
  - Evaluated with Mean Squared Error (MSE).
  - Visualized relationships with scatter plots and histograms.
- **Technologies:** Python, pandas, scikit-learn, TensorFlow, Jupyter Notebook, GitHub
- **Outcome:** Enhanced user experience with accurate and relevant car recommendations.

Netflix Data Analysis and Visualization **Aug 2022 – Dec 2022**

- **Description:** Analyzed Netflix's content to help users find preferred genres, directors, and actors.
- **Tools:** Tableau, Python, Kaggle dataset.
- **Key Contributions:**
  - Created interactive worksheets and dashboards in Table.
  - Analyzed data to identify trends and viewer preferences.
  - Developed visualizations for viewer distribution, top genres, directors, and actors.
- **Outcome:** Provided insights to improve content strategy and viewer satisfaction.

EXTRA-CURRICULAR ACTIVITIES

- Completed data analysis projects like **Fraud Detection** in Banking using RapidMiner Studio, including predictive modeling, data preprocessing, and visualization tasks, demonstrating competence in the platform's capabilities.
- Improved Prediction Accuracy: Enhanced the accuracy of predicting SpaceX Falcon 9 first-stage landing success to 88.89% using **Decision Tree Classifier**, aiding mission planning and risk assessment.

LEADERSHIP

- **Manager of Kashiyatra Cultural, the annual socio-cultural festival of IIT(BHU):** Led a team of at least 15 executives as the core team manager, contributing to year-over-year growth in the fest through implementing creative ideas in the events and attracting new sponsors.