Description

This project was created by Apoorv Vaishampayan for MIS695. The project is a data-driven analytical tool that employs Python for exploratory data analysis (EDA) and displays findings on a Streamlit website along with Key KPI Visualization &Machine Learning models and necessary performance improvement recommendations. It gives actionable analytics and assist in identifying service gaps at numerous customer touchpoints during airline travel. The framework's goal is to predict and improve customer happiness by resolving these service problems. In addition, the project includes a Power BI dashboard for ease large dataset presentations to stakeholders.

Installation

* Install Python 3.8 or higher on your system.
* (Optional) Create and activate a virtual environment.
* Install Anaconda open spyder
* Install all necessary libraries used in project through terminal or conda prompt
* pip install streamlit
* pip install pandas
* pip install seaborn
* pip install matplotlib
* pip install scikit-learn
* pip install plotly
* pip install openpyxl
* more libraries if any missing from default python installation
* Save your code in a file named MIS695script.py
* Upload your dataset in .xlsx format when prompted.
* For PowerBi just need a browser to see dashboard as view only
* To edit install Power Bi from Microsoft store

Inputs

The data is taken from Kaggle named - Airline Passenger Satisfaction with columns - id, Gender, Customer Type, Age, Type of Travel, Class, Flight Distance, Inflight wifi service, Departure/Arrival time convenient, Ease of Online booking, Gate location, Food and drink, Online boarding, Seat comfort, Inflight entertainment, On-board service, Leg room service, Baggage   
File Name - Airline Satisfaction Analysis.xlsx

Outputs

We have two types of outputs

1. Python code which shows output on Streamlit webpage – These shows different plots like pie charts, bar plots, sunburst plots, confusion matrix & recommendations with ML models
2. PowerBi Dashboard – Ease for presenting large dataset to stakeholders with interactive plots and analysis

Main Code File

The main code file for this project is MIS695script.py. This contains the core logic and orchestrates the other modules.

Running the Code

1. Install Anaconda, Python
2. Open Spyder
3. Install imported libraries in the code
4. Open Terminal and run the command “streamlit run ~/Downloads/MIS695script.py” (here Downloads is where my code is depending on where you save the code edit it)
5. Upload the dataset on Streamlit webpage.
6. Click on the PowerBi link to view the dashboard

Deployment

1. Install Anaconda, python
2. Open Spyder
3. Install imported libraries in the code
4. Open Terminal and run the command “streamlit run ~/Downloads/MIS695script.py” (here Downloads is where my code is depending on where you save the code edit it)
5. Upload the dataset on Streamlit webpage.
6. Click on the PowerBi link to view the dashboard

License

No license is necessary.

Contact

For any questions, issues running the code, or suggested improvements, please contact Apoorv Vaishampayan at [apoorv9903@gmail.com](mailto:apoorv9903@gmail.com)