

USER GUIDE

The attaching the deliverables include the following python script files:

1. **EDA_Analysis:** It has the python script file **EDA_Random_forest** both in **.py format and .ipynb**. This script performs EDA and model creation using Random forest is performed. Two methods of encoding are performed in this script and accuracy is compared. Random forest hyperparameter is performed using Randomized Search Cv
2. **SVM_OtherModel:** It has the python script file **SVM_And_other_algorithms** both in **.py format and .ipynb**. Here ,SVM,Decision Tree,Random Forest ,K Neighbors classifier models are created.In this file ,SVM Hyperparameter using GridsearchCV is performed.
3. **xgboost_Model_Creation:**It has python script file Xgboost both in **.py format and .ipynb**.Here xgboost model is created and hyperparameter tuning is performed using Randomized Search Cv.
4. **ANN_Model_Creation:**It has python script file ANN_Model both in **.py format and .ipynb format**.Here ANN model is created.
5. **Model_Creation_using_Random_forest_using_OOP:**It has python script file **random_forest_oops**.Here the model is created using Random forest. An object-oriented approach is followed for writing the script.I have used docstring for commenting on the code. You can read the information regarding class and method with help of the following commands:

Used for class

E.g. `print(Teaching_Assistant.__doc__)`

Used for method

E.g. `help(Teaching_Assistant.__init__)`
`help(Teaching_Assistant.one_hot_encoding)`

Libraries Installation:

The following are the steps to be followed by the user to execute the python code in a terminal. The code can also be run on a jupyter notebook. Open the console and check python installation by typing python.

Pre-Execution Steps:

Step 1: Install Python if not available on the system.

Step 2: Install the Pre-requisite python libraries used in the code:

Method 1- to install the libraries:

1. Download requirements.txt
2. Go to the directory where requirements.txt is located.
3. Run the following command in your terminal

pip install -r requirements.txt

Method 2:

1. After installing python, open your terminal
2. Type the following commands in your terminal:

pip install numpy

pip install pandas

pip install scipy

pip install scikit-learn

***** ***End of the Guide*** *****