NAME : MANOPRATHABAN S

REG NO : 19MIS0057

MAIL ID : manos2612001@gmail.com

KAIBURR ASSESSMENT

TASK 6:

- Dataset
- Loading the data
- Feature Engineering
- Text processing
- Exploring Multi-classification Models
- Compare Model performance
- Evaluation
- Prediction

Our aim is to classify the complaints of the consumer into predefined categories using a suitable classification algorithm. For now, we will be using the following classification algorithms.

- Linear Support Vector Machine (LinearSVM)
- Random Forest
- Multinomial Naive Bayes
- Logistic Regression

First, we will install the required modules.

```
import pandas as pd
import numpy as np
from scipy.stats import randint
import seaborn as sns # used for plot interactive graph.
import matplotlib.pyplot as plt
import seaborn as sns
from io import StringIO
from sklearn.feature_extraction.text import TfidfVectorizer
from sklearn.feature_selection import chi2
from IPython.display import display
from sklearn.model_selection import train_test_split
from sklearn.feature_extraction.text import TfidfTransformer
from sklearn.naive_bayes import MultinomialNB
from sklearn.linear_model import LogisticRegression
from sklearn.ensemble import RandomForestClassifier
```

- from sklearn.svm import LinearSVC
- from sklearn.model_selection import cross_val_score
- from sklearn.metrics import confusion_matrix
- from sklearn import metrics

I have implemented a basic Text classification model using a few algorithms and evaluated the model using accuracy,taken a few sample inputs and predicted.

THANK YOU