

Experiment Number 9

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Branch ::	CSE - IoT	Sec/Grp ::	1/A
Semester ::	6 th	Date ::	30 th Apr, 2022
Subject ::	ML Lab	CODE ::	CSD-386

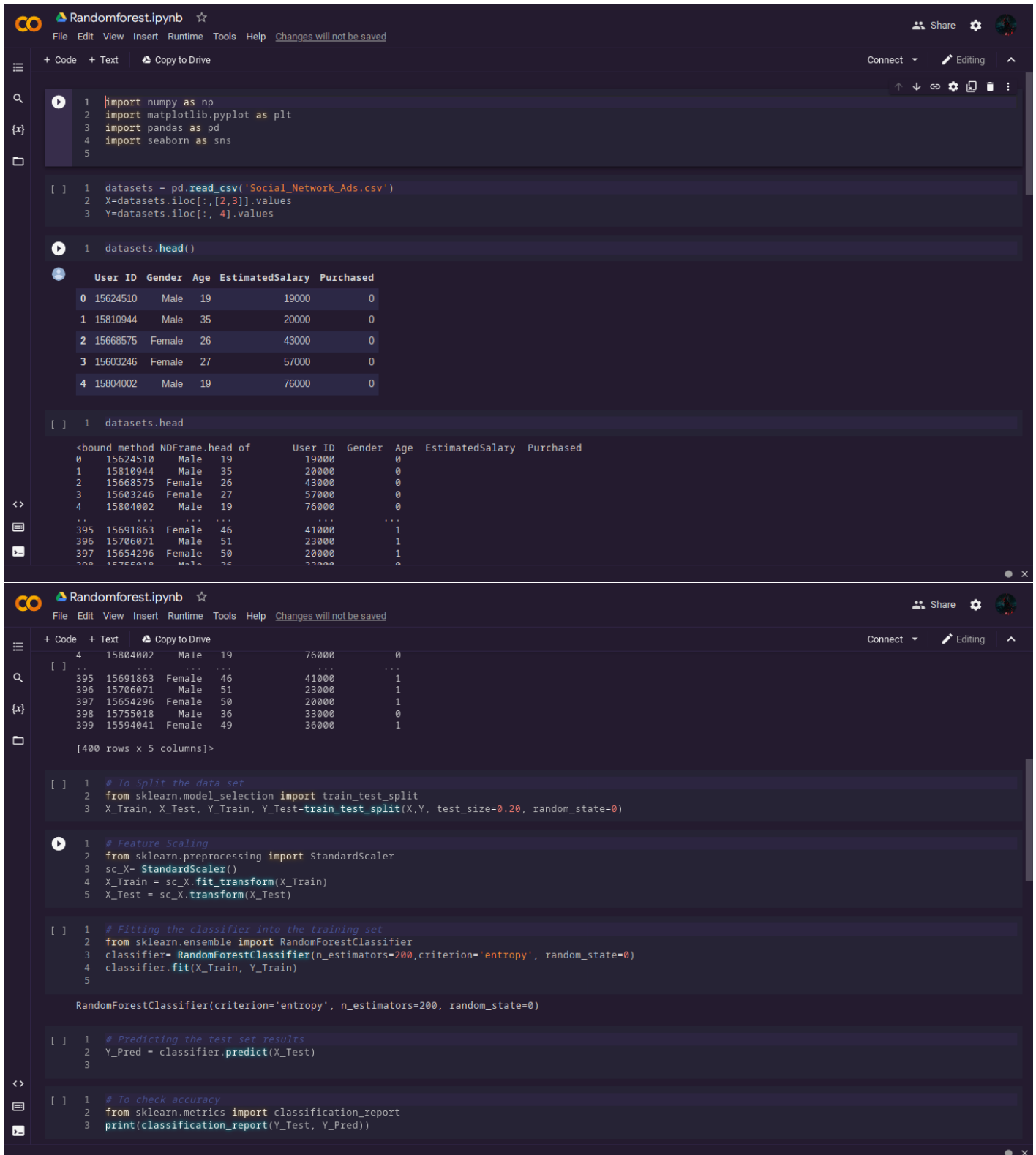
1. Aim :

To implement Random Forest Technique using Python programming Language.

2. Task :

1. Install the prerequisite Python
2. Load the dataset.
3. Apply Random Forest Technique
4. Analyse results/output.

5. Steps :



The screenshot displays a Jupyter Notebook with the following code and output:

```

1 import numpy as np
2 import matplotlib.pyplot as plt
3 import pandas as pd
4 import seaborn as sns
5
[ ] 1 datasets = pd.read_csv('Social_Network_Ads.csv')
2 X=datasets.iloc[:,[2,3]].values
3 Y=datasets.iloc[:, 4].values

1 datasets.head()

```

	User ID	Gender	Age	EstimatedSalary	Purchased
0	15624510	Male	19	19000	0
1	15810944	Male	35	20000	0
2	15668575	Female	26	43000	0
3	15603246	Female	27	57000	0
4	15804002	Male	19	76000	0

```

[ ] 1 datasets.head

<bound method NDFrame.head of      User ID  Gender  Age  EstimatedSalary  Purchased
0      15624510   Male   19           19000           0
1      15810944   Male   35           20000           0
2      15668575  Female   26           43000           0
3      15603246  Female   27           57000           0
4      15804002   Male   19           76000           0
...         ...   ...   ...           ...           ...
395     15691863  Female   46           41000           1
396     15706071   Male   51           23000           1
397     15654296  Female   50           20000           1
398     15755018   Male   36           33000           0
399     15594041  Female   49           36000           1

```

```

[ ] 1 # To Split the data set
2 from sklearn.model_selection import train_test_split
3 X_Train, X_Test, Y_Train, Y_Test=train_test_split(X,Y, test_size=0.20, random_state=0)

1 # Feature Scaling
2 from sklearn.preprocessing import StandardScaler
3 sc_X= StandardScaler()
4 X_Train = sc_X.fit_transform(X_Train)
5 X_Test = sc_X.transform(X_Test)

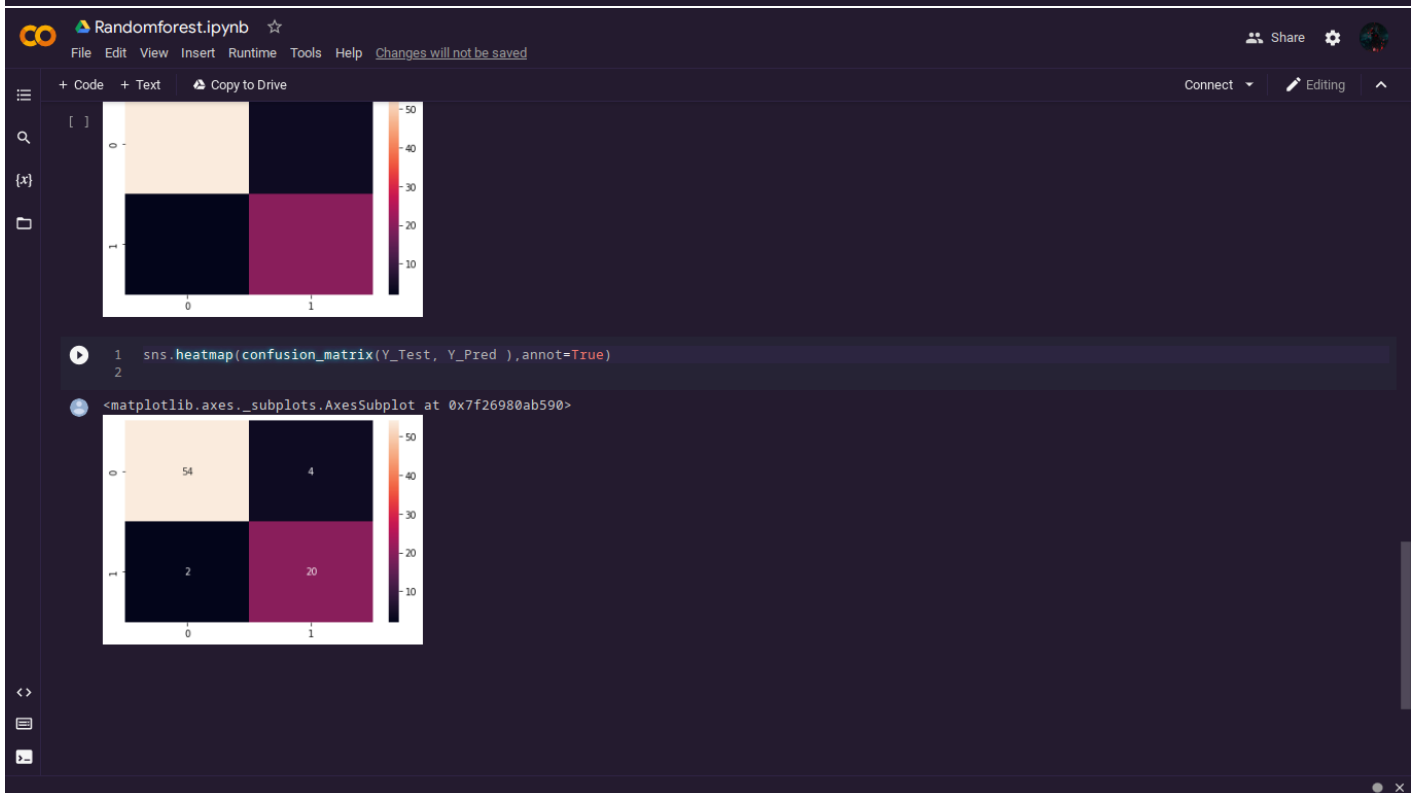
[ ] 1 # Fitting the classifier into the training set
2 from sklearn.ensemble import RandomForestClassifier
3 classifier= RandomForestClassifier(n_estimators=200,criterion='entropy', random_state=0)
4 classifier.fit(X_Train, Y_Train)
5

RandomForestClassifier(criterion='entropy', n_estimators=200, random_state=0)

[ ] 1 # Predicting the test set results
2 Y_Pred = classifier.predict(X_Test)
3

[ ] 1 # To check accuracy
2 from sklearn.metrics import classification_report
3 print(classification_report(Y_Test, Y_Pred))

```



Learning Outcomes :

- Random Forest Classifier
- Python
- Machine Learning
- Jupyter

S. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			