localhost:8888/notebooks/flight%20delay.ipynb

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Run Code

In [40]:
```
from sklearn.tree import DecisionTreeClassifier
dc=DecisionTreeClassifier()
dc.fit(x_train,y_train)
dc.score(x_test,y_test)
```

Out[40]: 0.9897641299510458

In [41]:
```
from sklearn.ensemble import RandomForestClassifier
model=RandomForestClassifier()
model=RandomForestClassifier(n_estimators=50,random_state=42)
model.fit(x_train,y_train)
model.score(x_test,y_test)
```

```
C:\Users\dhani\AppData\Local\Temp\ipykernel_2948\3023643624.py:4: DataConversionWarning: A column-vector y was passed when a 1d
array was expected. Please change the shape of y to (n_samples,), for example using ravel().
  model.fit(x_train,y_train)
```

Out[41]: 0.8945260347129506

In [42]:
```
pd.DataFrame(model.predict(x_test)).value_counts()
```

Out[42]:
```
0    1985
1     262
dtype: int64
```

In [43]:
```
from sklearn.linear_model import LogisticRegression
lr=LogisticRegression(solver='sag')
lr.fit(x_train,y_train)
lr.score(x_test,y_test)
```

```
C:\Users\dhani\anaconda3\lib\site-packages\sklearn\utils\validation.py:993: DataConversionWarning: A column-vector y was passed
when a 1d array was expected. Please change the shape of y to (n_samples, ), for example using ravel().
  y = column_or_1d(y, warn=True)
C:\Users\dhani\anaconda3\lib\site-packages\sklearn\linear_model\_sag.py:352: ConvergenceWarning: The max_iter was reached which
means the coef_ did not converge
  warnings.warn(
```

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Run Code

```
svm=SVC(kernel='sigmoid')
svm.fit(x_train,y_train)
svm.score(x_test,y_test)
```

```
C:\Users\dhani\anaconda3\lib\site-packages\sklearn\utils\validation.py:993: DataConversionWarning: A column-vector y was passed when a 1d array was expected. Please change the shape of y to (n_samples, ), for example using ravel().
  y = column_or_1d(y, warn=True)
```

Out[45]: 0.6822429906542056

In [46]:
```
pd.DataFrame(svm.predict(x_test)).value_counts()
```

Out[46]:
```
0    1794
1     453
dtype: int64
```

In [47]:
```
pd.DataFrame(y_test).value_counts()
```

Out[47]:
```
0    1802
1     445
dtype: int64
```

In [48]:
```
from sklearn.neighbors import KNeighborsClassifier
knn=KNeighborsClassifier(n_neighbors=5)
knn.fit(x_train,y_train)
knn.score(x_test,y_test)
```

```
C:\Users\dhani\anaconda3\lib\site-packages\sklearn\neighbors\_classification.py:198: DataConversionWarning: A column-vector y was passed when a 1d array was expected. Please change the shape of y to (n_samples,), for example using ravel().
  return self._fit(X, y)
C:\Users\dhani\anaconda3\lib\site-packages\sklearn\neighbors\_classification.py:228: FutureWarning: Unlike other reduction functions (e.g. `skew`, `kurtosis`), the default behavior of `mode` typically preserves the axis it acts along. In SciPy 1.11.0, this behavior will change: the default value of `keepdims` will become False, the `axis` over which the statistic is taken will be eliminated, and the value None will no longer be accepted. Set `keepdims` to True or False to avoid this warning.
  mode, _ = stats.mode(_y[neigh_ind, k], axis=1)
```

Out[48]: 0.9327992879394749

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