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In [ ]: import numpy as np
import pandas as pd
from sklearn.linear_model import LogisticRegression
import matplotlib.pyplot as plt
import seaborn as sns

In [ ]: data_call = pd.read_excel('./QF_Sheet.xlsx', sheet_name='Call', na_values='-')

In [ ]: greeks_call = data_call[['DELTA', 'GAMMA', 'THETA', 'VEGA', 'RHO', 'TREND']]

In [ ]: X_call = greeks_call.drop(columns=['TREND']).values
y_call = greeks_call['TREND'].values

In [ ]: from sklearn.model_selection import train_test_split
from sklearn.metrics import accuracy_score, recall_score, confusion_matrix, Conf

xtrain, xtest, ytrain, ytest = train_test_split(X_call, y_call, test_size=0.25,

In [ ]: logregCall = LogisticRegression().fit(xtrain, ytrain)

In [ ]: ypredTest_call = logregCall.predict(xtest)

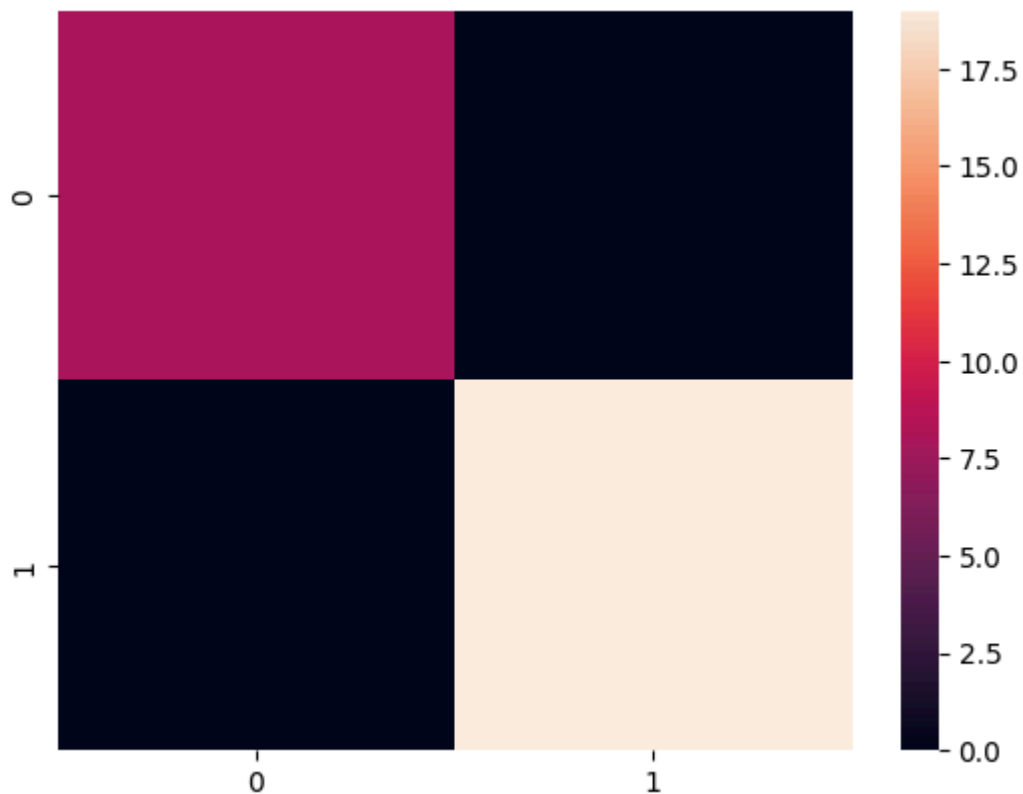
In [ ]: accuracy_score(ytest, ypredTest_call)

Out[ ]: 1.0

In [ ]: cf_call = confusion_matrix(ytest, ypredTest_call)

In [ ]: sns.heatmap(cf_call, cmap='rocket')

Out[ ]: <Axes: >
```



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In [ ]: data_put = pd.read_excel('./QF_Sheet.xlsx', sheet_name='Put', na_values='-')
        greeks_put = data_put[['DELTA', 'GAMMA', 'THETA', 'VEGA', 'RHO', 'TREND']]
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In [ ]: X_put = greeks_put.drop(columns=['TREND']).values
        y_put = greeks_put['TREND'].values
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In [ ]: from sklearn.model_selection import train_test_split

        xtrain, xtest, ytrain, ytest = train_test_split(X_put, y_put, test_size=0.25, ra
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In [ ]: logregPut = LogisticRegression().fit(xtrain, ytrain)
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In [ ]: ypredTest_put = logregPut.predict(xtest)
```

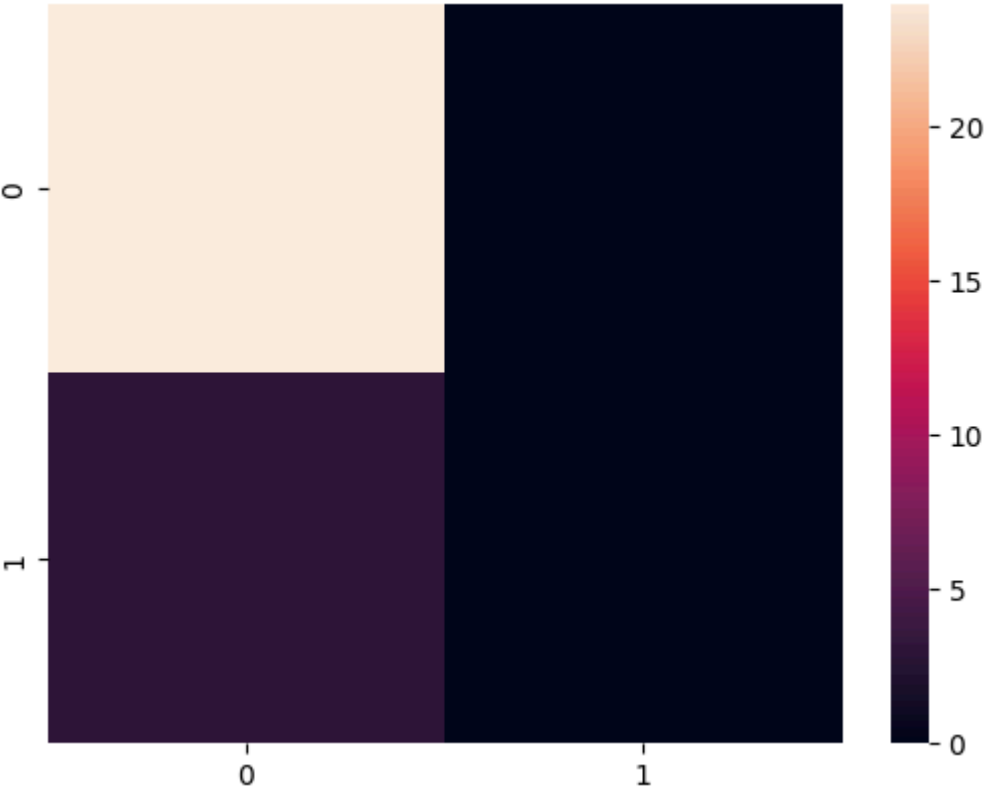
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In [ ]: accuracy_score(ytest, ypredTest_put)
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Out[ ]: 0.8888888888888888
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In [ ]: cf_put = confusion_matrix(ytest, ypredTest_put)
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In [ ]: sns.heatmap(cf_put, cmap='rocket')
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Out[ ]: <Axes: >
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In [ ]:
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