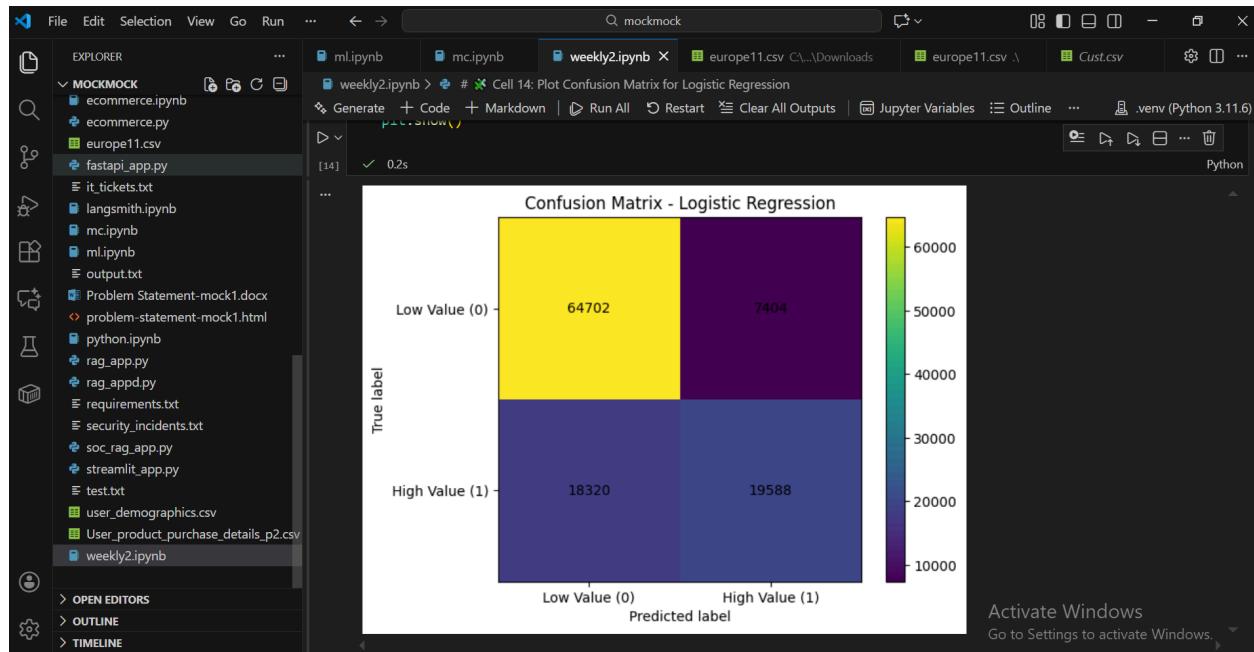


Abhishek Kumar Arya

10843241

Weekly 2



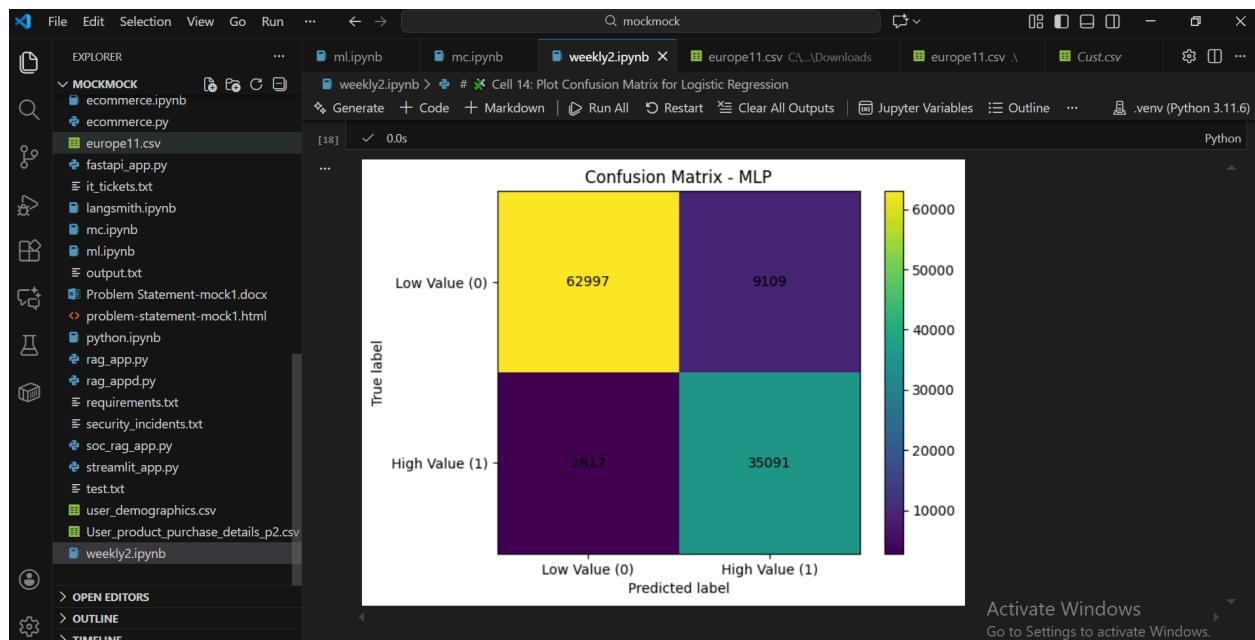
```
print("◆ MLP ROC-AUC:", roc_auc_mlp)
print("\nConfusion Matrix (MLP):\n", cm_mlp)
print("\nClassification Report (MLP):\n", classification_report(y_test, y_pred_mlp))

◆ MLP Test Accuracy: 0.8915956020355225
3438/3438 ━━━━━━━━ 2s 520us/step
◆ MLP ROC-AUC: 0.9426484602011937

Confusion Matrix (MLP):
[[62997  9109]
 [ 2817 35091]]

Classification Report (MLP):
precision    recall    f1-score   support
      0       0.96     0.87     0.91    72106
      1       0.79     0.93     0.85    37908

accuracy                           0.89    110014
macro avg       0.88     0.90     0.88    110014
weighted avg    0.90     0.89     0.89    110014
```



File Edit Selection View Go Run ... ↶ ↷ 🔍

EXPLORER

MOCKMOCK

- ecommerce.ipynb
- ecommerce.py
- europe11.csv
- fastapi_app.py
- it_tickets.txt
- langsmith.ipynb
- mc.ipynb
- ml.ipynb
- output.txt
- Problem Statement-mock1.docx
- problem-statement-mock1.html
- python.ipynb
- rag_app.py
- rag_appd.py
- requirements.txt
- security_incidents.txt
- soc_rag_app.py
- streamlit_app.py
- test.txt
- user_demographics.csv
- User_product_purchase_details_p2.csv
- weekly2.ipynb

File ml.ipynb mc.ipynb weekly2.ipynb europe11.csv C:\...\Downloads europe11.csv Cust.csv

Cell 14: Plot Confusion Matrix for Logistic Regression

Generate + Code + Markdown Run All Restart Clear All Outputs Jupyter Variables Outline venv (Python 3.11.6)

[24] ✓ 0.5s Python

Decision Tree Accuracy: 0.8897867544130748
Decision Tree ROC-AUC: 0.9394611711716752

Confusion Matrix (Decision Tree):
[[62238 9868]
[2257 35651]]

Classification Report (Decision Tree):

	precision	recall	f1-score	support
0	0.97	0.86	0.91	72106
1	0.78	0.94	0.85	37908
accuracy			0.89	110014
macro avg	0.87	0.90	0.88	110014
weighted avg	0.90	0.89	0.89	110014

BONUS Cell 25: Decision Tree Feature Importance

```
feature_importances = pd.Series(dtree.feature_importances_, index=X.columns)
feature importances = feature importances.sort values(ascending=False)
```

Activate Windows Go to Settings to activate Windows Python

[25] ✓ 0.0s

Decision Tree (Top Levels)

