

```
import pandas as pd import numpy as np from
sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import confusion_matrix, accuracy_score
df =
pd.read_csv('/content/suv_data.csv')
print("First few rows of the
dataset:") print(df.head())
```

First few rows of the dataset:

	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

```
X = df[['Age', 'EstimatedSalary']].values y
= df['Purchased'].values
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.25,
random_state=0)
scaler = StandardScaler()
X_train_scaled = scaler.fit_transform(X_train)
X_test_scaled = scaler.transform(X_test)

model =
LogisticRegression(random_state=0)
model.fit(X_train_scaled, y_train) y_pred
= model.predict(X_test_scaled)
cm = confusion_matrix(y_test,
y_pred) tn, fp, fn, tp = cm.ravel()

test_accuracy = accuracy_score(y_test, y_pred)
training_accuracy = model.score(X_train_scaled, y_train)
print("\nConfusion
Matrix:") print(cm)
```

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3. A PYTHON PROGRAM TO IMPLEMENT LOGISTIC MODEL Roll

```
Confusion Matrix:  
[[65  3]  
 [ 8 24]]
```

```
print(f"\nTrue Positives (TP): {tp}")  
print(f"True Negatives (TN): {tn}") print(f"False  
Positives (FP): {fp}") print(f"False Negatives  
(FN): {fn}")
```

```
True Positives (TP): 24  
True Negatives (TN): 65  
False Positives (FP): 3  
False Negatives (FN): 8
```

```
print(f"\nTest Set Accuracy: {test_accuracy:.4f}")  
print(f"Training Set Accuracy: {training_accuracy:.4f}")
```

```
Test Set Accuracy: 0.8900  
Training Set Accuracy: 0.8233
```