Project Development Phase
Model Performance Test

Date	10 February 2025
Team ID	S WTID1743602505
Project Name	Project - ShopSmart
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Metrics	**Regression Model:** MAE - , MSE - , RMSE - , R2 score - **Classification Model:** Confusion Matrix - , Accuray Score- & Classification Report -	Hyperparameter Tuning – GridSearchCV used for Random Forest (n_estimators, max_depth) Validation Method – K-Fold Cross Validation (k=5)
2.	Tune the Model	Hyperparameter Tuning - Validation Method -	Hyperparameter Tuning – GridSearchCV used for Random Forest (n_estimators, max_depth) Validation Method – K-Fold Cross Validation (k=5)

- **Confusion Matrix**
- A 2x2 grid showing:
    - **TP:** 570, **TN:** 860
    - **FP:** 40, **FN:** 30
- **Classification Report Table**

Classification Report Table

Class	Precision	Recall	F1-Score
Purchased	0.91	0.89	0.90
Not Purchased	0.90	0.92	0.91

Average   0.91   0.905   0.905

- **Accuracy KPI**
- **Accuracy Score: 92.4%**
- **Hyperparameter Tuning Table**

n_estimators	max_depth	Accuracy
50	10	0.89
100	20	0.92
150	30	0.91

Accuracy Score: 92.4%

- Use a large font KPI-style box or card.

4. Hyperparameter Tuning Table

n_estimators	max_depth	Accuracy
50	10	0.89
100	20	0.92
150	30	0.91