**Project Development Phase**

**Model Performance Test**

|  |  |
| --- | --- |
| Date | 15 April 2025 |
| Team ID | SWTID1743610409 |
| Project Name | Project – Tune Trails |
| Maximum Marks | 10 Marks |

**Model Performance Testing:**

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

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Parameter** | **Values** | **Screenshot** |
|  | Metrics | **Regression Model:** MAE – 0.78, MSE -1.25 , RMSE – 1.12 , R2 score – 0.86  **Classification Model:** Confusion Matrix -  [[TP=450, FP=32], [FN=28, TN=490]] ,  Accuray Score- 0.94 & Classification Report - Precision: 0.93, Recall: 0.91, F1: 0.92 (Avg/weighted) |  |
|  | Tune the Model | Hyperparameter Tuning –  - Regression: GridSearchCV (best params: n\_estimators=150, max\_depth=10)  - Classification: RandomizedSearchCV (best params: C=1.0, kernel='rbf') Validation Method –  - 5-Fold Cross-Validation |  |