**Project Development Phase**

**Model Performance Test**

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| Date | 24 June 2025 |
| Team ID | LTVIP2025TMID35892 |
| Project Name | **Enchanted Wings: Marvels of Butterfly Species** |
| Maximum Marks | 10 Marks |

**Model Performance Testing:**

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

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| **S.No.** | **Parameter** | **Values** | **Screenshot** |
|  | Metrics – Classification Model  Confusion Matrix  Accuracy Score  Classification Report | **[[34, 1], [2, 63]]** Confusion Matrix - , Accuray Score-  0.96  **Precision:** 0.95   **Recall:** 0.96   **F1-Score:** 0.95 **Precision:** 0.95   **Recall:** 0.96   **F1-Score:** 0.95 |  |
|  | Tune the Model  Hyperparameter Tuning  Validation Method | GridSearchCV used to tune: max\_depth, learning\_rate, n\_estimators (XGBoost Classifier)  Stratified K-Fold Cross Validation (5-fold) to maintain class balance during training |  |