**Project Development Phase**

**Model Performance Test**

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| Date | 07/02/2026 |
| Team ID | LTVIP2026TMIDS80883 |
| Project Name | Prosperity Prognosticator: Machine Learning for Startup Success Prediction |
| 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 | **Regression Model:** MAE – 2.45  MSE – 8.32  RMSE – 2.88  R² Score – 0.84 **Classification Model:** Confusion Matrix – Generated using confusion\_matrix()  Accuracy Score – 0.80 (80%)  Classification Report –  Class 0 → Precision: 0.59, Recall: 0.78, F1-score: 0.67  Class 1 → Precision: 0.92, Recall: 0.82, F1-score: 0.87  Overall Accuracy: 0.81 |  |
|  | Tune the Model | **Hyperparameter Tuning:** GridSearchCV used with parameters – n\_estimators, max\_depth, min\_samples\_split, min\_samples\_leaf, bootstrap   **Validation Method:** 5-Fold Cross Validation (cv=5)  Parallel processing enabled (n\_jobs = -1) |  |