

# Project Development Phase

## Model Performance Test

Date	8 February 2026
Team ID	LTVIP2026TMIDS57513
Project Name	<b>calculating family expenses using service now</b>
Maximum Marks	10 Marks

### Model Performance Testing:

The project team shall fill the following information in model performance testing .

S.No.	Parameter	Values	Screenshot
1.	Metrics	<b>Regression Model:</b> <b>1. MAE -</b> Measures the average absolute difference between predicted and actual values. <b>2. MSE -</b> Calculates the average of squared differences between predicted and actual values. <b>3. RMSE -</b> Represents the square root of MSE, showing prediction error in the same units as the output. <b>4. R2 score -</b> Indicates how well the model explains the variance in the actual data.	Screenshot of the output screen or console showing calculated regression metric values. Screenshot displaying the confusion matrix table and classification performance report.

		<p><b>Classification Model:</b></p> <p><b>1. Confusion Matrix -</b> Displays the comparison between actual and predicted class values to identify correct and incorrect predictions.</p> <p><b>2. Accuracy Score-</b> Measures the overall percentage of correctly classified instances</p> <p><b>3. Classification Report -</b> Summarizes detailed performance metrics including precision, recall, and F1-score for each class.</p>	
2.	Tune the Model	<p><b>Hyperparameter Tuning -</b> Adjusts model parameters to improve performance and reduce prediction errors.</p> <p><b>Validation Method -</b> Evaluates the model using validation techniques to ensure reliable performance on unseen data.</p>	Screenshot showing tuned parameter values or comparison of performance before and after tuning. Screenshot showing validation results such as train–test split output or validation accuracy summary.