

Model Development Phase Template

Date	23 September 2024
Team ID	LTVIP2024TMID25001
Project Title	Customer Segmentation Using Machine Learning
Maximum Marks	6 Marks

Model Selection Report

In the forthcoming Model Selection Report, various models will be outlined, detailing their descriptions, hyperparameters, and performance metrics, including Accuracy or F1 Score. This comprehensive report will provide insights into the chosen models and their effectiveness.

Model Selection Report:

Model	Description	Hyperpar ameters	Performance Metric (e.g., Accuracy, F1 Score)
KNN	A neural network model designed for tabular data; captures complex patterns, suitable for high-dimensional data.	-----	Accuracy=84%
Decision Tree	A neural network model designed for tabular data; captures complex patterns, suitable for high-dimensional data.	-----	Accuracy=89%

Random Forest	Ensemble of decision trees; reduces overfitting, handles complex relationships, and provides feature importance.	-----	Accuracy=78%
XGBoost	An optimized gradient boosting model; handles large datasets, reduces overfitting, and delivers high accuracy.	-----	Accuracy82%