Model Development Phase Template

Date	10 July 2024
Team ID	SWTID1720097765
Project Title	Ecommerce Shipping Prediction
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	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Random Forest	Ensemble of decision trees; robust, handles complex relationships, reduces overfitting	random_state=1234	Accuracy Score = 65.3%
Ridge Classifier	Ridge classification algorithm relies on subspace assumption which states that samples of a specific class lie on a linear subspace and a new test sample to a category will be described as a linear combination of training samples of the relevant class	random_state=1234	Accuracy Score = 64.9%

KNN	Classifies based on nearest neighbors; adapts well to data patterns.	-	Accuracy Score = 64%
XG Boosting	XG boosting with trees; optimizes predictive performance, handles complex relationships	n_estimators=300, n_jobs=-1, random_state=1234	Accuracy Score = 64.6%
Logistic Regression CV	a classification model, uses a logistic function to estimate probabilities and employs cross-validation for hyperparameter tuning	random_state=1234	Accuracy Score = 64.1%
Logistic Regression	It predict the output of categorical dependent variables	random_state=1234	Accuracy Score = 64%
Decision tree classifier	Simple tree structure ; interpretable, captures non-linear relationships	criterion='entropy', random_state=1	Accuracy Score = 64.6%