

Model Development Phase Template

Date	08 JULY 2024
Team ID	SWTID1720260935
Project Title	Ecommerce Shipping Prediction 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	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Logistic Regression	a statistical method that mimics the relationship between attributes and a binary dependent variable.	Learning rate, Batch size, No. of Iterations	64%

Support Vector Machine (SVM)	A binary linear classifier that is not probabilistic. The separation hyperplane that optimizes the margin between the two classes is found using SVMs.	Kernel function, regularization parameter, Kernel="linear"	66%
X-Gradient Boosting Machine	A machine learning model that produces a prediction model in a stage-wise fashion. It combines weak learning models into a strong learner.	Number of boosting stages, learning rate	66%
Random Forest	Using random feature and data sample selections, multiple decision trees are trained as part of the ensemble tree learning	Number of trees in the forest, maximum depth of each tree, N_Estimators=''	66%

	technique. It's sturdy against overfitting and able to handle a lot of features.	7', ,Criteria="Entropy",Random_state=0'	
Artificial Neural network	The network is able to recognize intricate patterns and make judgments depending on incoming data since each neuron processes and relays information to neurons in later layers	The no of neurons, Learning rate, Batch size, Knobs and Switches, Kernel_initializer="Random_Uniform", Activation="Relu"	67%
K-Nearest Neighbour	Whereas traditional parametric models derive explicit equations from data, KNN relies its predictions on the similarity between newly added and previously labeled data points.	The no of Neighbours, Batch size, N_neighbours=7'	65%

