

Model Development Phase Template

Date	10 july 2024
Team ID	SWTID1720183095
Project Title	Ecommerce Shipping Prediction Using MachineLearning
Maximum Marks	6 Marks

Model Selection Report

A number of models will be described along with their hyperparameters and performance measures (such as F1 Score or Accuracy) in the soon-to-come Model Selection Report. This extensive report will shed light on the models that were selected and how well they worked.

Model Selection Report:

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy)
Logistic Regression	A statistical method that models the relationship between features and a binary dependent variable.	Learning rate, Batch size, No of Iterations	64%

Support Vector Machine (SVM)	A non-probabilistic, binary linear classifier. SVMs work by finding a separation hyperplane that maximizes the margin between the two classes.	Kernel function, regularization parameter, Kernel="linear"	66%
XGradient 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	69%
Random Forest	This ensemble tree learning method works by training multiple decision trees on random subsets of features and data samples. It can handle many features and is robust to overfitting.	Number of trees in the forest, maximum depth of each tree, N_Estimators='7', Criteria="Entropy", Random_state='0'	68%

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	KNN bases its predictions on the similarity between newly added data points and previously labeled data points, in contrast to conventional parametric models that derive explicit equations from data.	The no of Neighbours, Batch size, N_neighbours='7'	65%