Model Development Phase Template

Date	04 June 2024
Team ID	SWTID1720096620
Project Title	E-commerce Shipping Prediction Using Machine Learning
Maximum Marks	5 Marks

Feature Selection Report Template

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

Feature	Description	Selected (Yes/No)	Reasoning
ID	ID Number of Customers.	No	It is a unique identifier that does not contain any relevant information for predicting the delivery time. Including it would not contribute to the predictive power of the model and could introduce unnecessary noise.
Warehouse_block	The Company has a Warehouse divided into blocks such as A, B, C, D, and E.	Yes	The location within the warehouse can affect the speed of processing and dispatching shipments, impacting delivery times.
Mode_of_Shipment	The Company Ships the products in multiple ways such as Ship, Flight etc.	Yes	Different shipment modes (Flight, Ship, Road) have varying transit times and reliability, making this a critical factor in predicting on-time delivery.
Customer_care_calls	The number of calls made for enquiry of the shipment.	Yes	The number of calls can indicate potential issues or delays, affecting the likelihood of on-time delivery.

Customer_rating	The company has rated from every customer.	Yes	Customer ratings may reflect past experiences and satisfaction levels, indirectly influencing the efficiency of handling and shipping processes.
Cost_of_the_Product	Cost of the Product in US Dollars.	Yes	Higher-cost products might receive priority handling and faster shipping options, impacting delivery times.
Prior_purchases	The Number of Prior Purchases.	Yes	A customer's history of purchases can influence the reliability and efficiency of the shipping process, as repeat customers may be prioritized.
Product_importance	The products are categorized into various parameters such as low, medium, and high.	Yes	The importance of the product (low, medium, high) can dictate the urgency and shipping method, affecting delivery speed.
Gender	Male and Female.	Yes	Gender of the customer might be correlated with specific delivery preferences, which could impact delivery times.
Discount_offered	Discount offered on that specific product.	Yes	Products with higher discounts might be shipped using slower methods to offset costs, affecting delivery times.
Weight_in_gms	Weight of the product in grams.	Yes	This can influence shipping method choices and transit times, impacting delivery accuracy.
Reached on Time Y.N	It is the target variable, where 1 Indicates that the product has NOT reached on time and 0 indicates it has reached on time.	Yes	The weight of the product can influence shipping method choices and transit times, impacting delivery accuracy.