Model Development Phase Template

Date	**10 July 2024**
Team ID	**SWTID1720115788**
Project Title	**Ecommerce 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	It describes id of Customer which identifies uniquely	No	In predictive models, the product ID is often treated as an independent variable.Its inclusion doesn't significantly improve delivery time predictions.
Warehouse_block	Warehouse is storage area divided into 5 blocks	Yes	The dataset reveals that Warehouse Block F holds the largest number of products among all warehouse blocks. Each warehouse block shows nearly equal rates of on-time and delayed deliveries. While Warehouse Block F dominates in terms of product volume, its

			delivery performance remains consistent with other blocks.
Mode_of_Shipment	By which means product is transported	Yes	Mode of shipment is also important because it tells us by which means products are delivered on time
Customer_care_calls	Calls made by customer or staff	Yes	The number of calls made by customers for inquiries about their shipment can impact delivery time. More calls might indicate issues or concerns, which could lead to delays.
Customer_rating	Rating given by customer	Yes	Customer ratings play a crucial role. Higher ratings (closer to 5) are associated with timely product delivery
Cost_of_the_Product	Describes the cost of product	Yes	The cost of the product may indirectly affect delivery time. Higher-cost items might receive more attention during handling and shipping.
Prior_purchases	Number of items customer had already purchased	Yes	Customers with more prior purchases tend to have better on-time delivery rates. Because some platforms categarise customers like insiders in case of mynthra
Product_importance		Yes	It tells us whether important products are delivered on time or not
Gender	Describes gender of person	Yes	Gender might influence delivery times indirectly. For instance, certain products (e.g., clothing, cosmetics) may be more popular

			among specific genders, affecting shipping volumes. However, gender alone is unlikely to be a strong predictor of delivery performance. Other factors play a more significant role.
Discount_offered	Indicates discount percentage	Yes	Discounts can affect delivery times. Here's how: Higher Discounts: Offering substantial discounts may lead to increased order volume. If not managed efficiently, this surge could strain logistics and cause delays.Lower discounts might attract fewer orders, allowing for smoother processing and faster delivery.
Weight_in_gms	Indicates weight of product	No	Heavier products generally require more handling effort and specialized shipping methods. Shipping companies prioritize lightweight parcels for efficiency. Heavy items may experience longer transit times due to handling logistics.
Reached.on.Time_Y. N	States whether the product is reached on time or not	Yes	It is crucial because it is target column