

## Model Development Phase Template

|               |   |
|---------------|---|
| Date          | 20 July ,2024   |
| Team ID       | SWTID1720519736   |
| Project Title | Ecommerce Shipping Prediction<br>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               | Unique identifier for each shipment | No                | For predicting on-time delivery, an ID is not required.                                 |
| Warehouse_block  | Warehouse location identifier       | Yes               | Relevant for analyzing shipping efficiency across different blocks.                     |
| Mode of shipment | Mode of shipment                    | Yes               | <b>Important for understanding shipping methods and their impact on delivery times.</b> |

|                            |  |   |            |  |
|----------------------------|--|---|------------|--|
| <b>Customer_care_calls</b> |  | <b>Number of customer servicecalls</b>  | <b>Yes</b> | <b>Indicates customer service interactions, which may affect customer satisfaction.</b>          |
| <b>Customer_rating</b>     |  | <b>Rating given bycustomers</b>         | <b>Yes</b> | <b>Reflects customer satisfacti on levels, potentiall y impactin g future purchase decisions</b> |
| <b>Cost_of_the_Product</b> |  | <b>Cost associated witheach product</b> | <b>Yes</b> | <b>Influences profit marginsand financial analysis related to product sales.</b>                 |
| <b>Prior_purchases</b>     |  | <b>Number of priorpurchases</b>         | <b>Yes</b> | <b>Indicates customer loyalty and purchasi ng history.</b>                                       |

|                           |  |   |            |   |
|---------------------------|--|---|------------|---|
| <b>Product_importance</b> |  | <b>Importance level<br/>ofthe product</b> | <b>Yes</b> | <b>Helps<br/>prioritize<br/>shipping<br/>and<br/>inventory<br/>manageme<br/>ntbased on<br/>product<br/>criticality.</b> |
| <b>Gender</b>             |  | <b>Gender of<br/>the<br/>customer</b>     | <b>Yes</b> | <b>Relevant<br/>for<br/>demograph<br/>ic</b>  |

|                                 |  |   |            |  |
|---------------------------------|--|---|------------|--|
|                                 |  |   |            | <b>analysis and customer segmentation.</b>                                     |
| <b>Discount_offered</b>         |  | <b>Discount offered on the product</b>                | <b>Yes</b> | <b>Impacts pricing strategy and customer purchase behavior.</b>                |
| <b>Weight_in_gms</b>            |  | <b>Weight of the product in grams</b>                 | <b>Yes</b> | <b>Important for logistics and shipping cost calculations.</b>                 |
| <b>Reached.on.Time_Y.<br/>N</b> |  | <b>Binary indicator (1 or 0) for on-time delivery</b> | <b>Yes</b> | <b>Target variable for predictive modeling to assess shipping punctuality.</b> |