

## Model Development Phase Template

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|---------------|--|
| Date          | 20 July 2024   |
| Team ID       | SWTID1720110595                                      |
| 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 linear model for binary classification            | random_state=1234 | Accuracy: 69.08, F1 Score: 64.20              |
| XGBoost                | Extreme Gradient Boosting for binary classification | random_state=1234 | Accuracy: 72.54, F1 Score: 70.19              |
| Logistic Regression CV | Logistic Regression with cross-validation           | random_state=1234 | Accuracy: 70.37, F1 Score: 63.95              |

|                  |   |                   |                                  |
|------------------|---|-------------------|----------------------------------|
| Ridge Classifier | Linear classifier using Ridge regression      | random_state=1234 | Accuracy: 71.21, F1 Score: 65.73 |
| KNN              | K-Nearest Neighbors for classification        | n_neighbors=5     | Accuracy: 71.33, F1 Score: 67.61 |
| Random Forest    | Ensemble method using multiple decision trees | random_state=1234 | Accuracy: 73.99, F1 Score: 69.55 |
| SVM classifier   | Support Vector Machine for classification     | random_state=1234 | Accuracy: 73.53, F1 Score: 64.52 |