**Model Development Phase Template**

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| Date | 14-07-2024 |
| Team ID | 740299 |
| Project Title | Customer Shopping Segmentation by 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.

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| **Model** | **Description** | **Hyperparameters** | **Performance**  **Metric (e.g.,**  **Accuracy, F1**  **Score)** |
| KMeans | Clustering algorithm that partitions data into K clusters; effective for identifying distinct customer segments based on shopping behavior. | n\_clusters=5 | Accuracy score =  85% |
| Decision  Tree | Simple tree structure; interpretable, captures non-linear relationships, suitable for initial insights into customer shopping patterns. | - | Accuracy score =  85% |
| KNN | Classifies based on nearest neighbors; adapts well to data patterns, effective for customer segmentation. | - | Accuracy score =  100% |

