

**Model Development Phase Template**

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| **Model** | **Description** | **Hyperparameters** | **Performance Metric (e.g., Accuracy, F1 Score)** |
| Logistic  Regression | A statistical model that predicts the probability of a binary outcome. | - | Accuracy = 94% |
| Decision Tree | Simple tree structure, interpretable, captures nonlinear relationships, suitable for initial insights into landing success patterns. | - | Accuracy = 94% |

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| Date | 15 July 2024 |
| Team ID | 740684 |
| Project Title | Space X Falcon 9 First Stage Landing Success Predictor |
| 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:**



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| K-Nearest  Neighbors  (KNN) | Classifies based on nearest Neighbors,adapts well to data patterns, effective for local variations in landing success criteria. | **-** | Accuracy = 94% |
| Random  Forest | Ensemble of decision trees; robust, handles complex relationships, reduces overfitting, and provides feature importance for landing success prediction. | **-** | Accuracy = 94% |