

## Model Development Phase Template

Date	15 July 2024
Team ID	739682
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:

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 non-linear relationships, suitable for initial insights into landing success patterns.	-	Accuracy = 94%

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%