

## Model Development Phase Template

Date	15 July 2024
Team ID	739682
Project Title	Space X Falcon 9 First Stage Landing predictor
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
FlightNumber	Sequential number of the flight	No	For predicting the landing success, a FlightNumber is not required
Date	Date of the flight	No	Temporal data is not directly predictive of landing success
BoosterVersion	The version of the Falcon 9 booster used for the launch	No	Not included due to focus on other features

PayloadMass	The weight of the payload	Yes	Heavier payloads might affect the landing success
Orbit	The orbit in which the payload is to be placed	Yes	The target orbit can impact the trajectory and landing conditions
LaunchSite	The specific location from which the rocket was launched	Yes	Different launch sites have varying success rates due to geographical factors
Flights	Number of flights the booster has been used in	Yes	Boosters with more flights may have different wear and performance levels
GridFins	Indicates if the rocket had grid fins	Yes	Grid fins can improve the control and success of the landing
Legs	Indicates if the rocket had landing legs	Yes	Landing legs are crucial for a successful landing
Reused	Indicates if the booster was reused	No	Not included due to focus on other features
Block	Block number of the rocket	Yes	Newer blocks may have more successful landings
ReusedCount	Number of times the booster has been reused	Yes	Reused boosters may show patterns in success rates

Serial	Serial number of the booster	No	Used for identification, not predictive
Longitude	Longitude of the launch site	Yes	Geographical factor that might influence the success rate
Latitude	Latitude of the launch site	Yes	Geographical factor that might influence the success rate
LandingPad	The landing pad used for the landing	No	Not included due to focus on other geographical features
Class	Indicates whether the landing was a success or not	Yes	Target variable for the prediction model