Project Initialization and Planning Phase

Date	15 July 2024
Team ID	739682
Project Name	SpaceX Falcon 9 First Stage Landing Success Predictor
Maximum Marks	3 Marks

Define Problem Statements (SpaceX Falcon 9 First Stage Landing Success Predictor):

Develop a predictive model to determine the likelihood of a successful landing of the Falcon 9 first stage booster. The model should utilize historical launch data, including factors such as launch conditions, rocket specifications, and landing parameters. Accuracy and reliability of the predictions are critical to support mission planning and risk assessment. The ultimate goal is to enhance the efficiency and safety of SpaceX's reusable rocket program. Analyzing and understanding key variables that impact landing success is essential.

HEADER	DESCRIPTION
I am	SpaceX mission planners, engineers, and data scientists
I'm trying to	Predict the success of Falcon 9 first stage landings
But	Incomplete or noisy data impacting prediction accuracy.
Because	Historical data might have gaps or inconsistencies.
Which makes me feel	Frustrated due to unreliable predictions impacting decision-making.

Example:

Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	SpaceX engineers and analysts	Predict the success of Falcon 9 first stage landings	But	Current prediction methods lack accuracy and real-time capabilities	Because precise landing predictions ensure mission success and cost savings
PS-2	Aerospace researchers and stakeholders	Understand the factors influencing Falcon 9 first stage landing outcomes	But	Data analysis is complex due to diverse variables and limited historical data	Because insights into landing performance enhance future mission planning and safety