# Space X Falcon 9 First Stage Landing Prediction

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## Hands on Lab: Complete the Machine Learning Prediction lab

▶ Space X advertises Falcon 9 rocket launches on its website with a cost of 62 million dollars; other providers cost upward of 165 million dollars each, much of the savings is because Space X can reuse the first stage. Therefore if we can determine if the first stage will land, we can determine the cost of a launch. This information can be used if an alternate company wants to bid against space X for a rocket launch. In this lab, you will create a machine learning pipeline to predict if the first stage will land given the data from the preceding labs.

#### Objectives

#### Perform exploratory Data Analysis and determine Training Labels

- create a column for the class
- ► Standardize the data
- ► Split into training data and test data

## Find best Hyperparameter for SVM, Classification Trees and Logistic Regression

Find the method performs best using test data

#### Steps

- ▶ Import Libraries and Define Auxiliary Functions
- ▶ Load the dataframe
- ▶ Proprocessing the Data
- ► Handling the Missing Values
- ► Transform the Data
- ► Modeling the Data
- **▶** Evaluation

## Thank you So much