IBM Developer
SKILLS NETWORK

Winning Space Race with Data Science

<Name>
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Outline

- Executive Summary
- Introduction
- Methodology
- Results
- Conclusion
- Appendix

Executive Summary

- Summary of methodologies
  - Data collection (API)
  - Exploratory analysis with SQL
  - Exploratory analysis with python dataviz
- Summary of all results
  - Exploratory result

Introduction

- Project background and context
  - Considering the cost of the entire rocket we want to predict the landing of the first stage of the rocket and so the probability of its reusability
- Problems you want to find answers
  - What are the parameters of the failure for this mission
  - Define those hyperparameters
  - How Space Y can peform better landing

Section 1

Methodology

Methodology

Executive Summary

- Data collection methodology:
  - Request on API
- Perform data wrangling
  - Eliminate or clean the useless data
- Perform exploratory data analysis (EDA) using visualization and SQL
- Perform interactive visual analytics using Folium and Plotly Dash
- Perform predictive analysis using classification models
  - Pipelines and scores of the model

Data Collection

- Describe how data sets were collected.
- You need to present your data collection process use key phrases and flowcharts

Data Collection – SpaceX API

- API call
- Json result converting
- Use tabular form pands dataframe
- Clean
- Load

Data Wrangling

- Count null values in each column
- Eliminate or transform the column
- Load

EDA with Data Visualization

- Collect the data
- Put in tabular form pandas or list
- Plot the data between each complete subset
- Interpret the tendancy
- Iterate for all variables

EDA with SQL

- Load the SQL table
- Summarize data for specified relevant columns
- Interpret

Results

- Exploratory data analysis results
  - Results shows that Space Y have better success in landing first stage within the time and rockets are sent in greater orbit
- Predictive analysis results
  - The tendency of success from now tend to be a simple linear regression over the time
  - Depending on the orbit of mass, the mission's success prediction vary a lot

Thank you!