



### PLACEMENTDOST

#### Note:

Please be advised that these assessment inquiries are designed to accommodate interns with diverse skill levels, ranging from novices to seasoned analysts. Should you encounter any challenging questions, you are encouraged to seek solutions independently or reach out to us for assistance at [intern@placementdost.com](mailto:intern@placementdost.com). Best wishes for success in completing the assessment!

1. Import the space missions dataset into R and inspect its structure.
2. Clean the dataset by handling missing values, duplicates, and outliers.
3. Explore the distribution of launch locations using visualizations.
4. Create a new variable to represent the year of each space mission.
5. Calculate the average cost of rockets for each company.
6. Conduct a hypothesis test to compare the average mission costs between active and inactive rockets.
7. Create a bar plot to visualize the count of missions for each mission status.
8. Explore the trends in space missions over time using time series analysis.
9. Merge the space missions dataset with an additional dataset containing rocket details.
10. Extract key terms from the mission names and analyze their frequency.
11. Create an interactive geographical map of launch locations.
12. Apply clustering algorithms to group missions based on certain features.
13. Build a regression model to predict the mission cost based on other variables.
14. Reshape the data to a long format for analysis and visualization.
15. Use forecasting techniques to predict the number of missions for the next year.
16. Develop a classification model to predict mission success or failure.
17. Scrape additional data on rocket details from a website and integrate it into the analysis.
18. Create an interactive dashboard to visualize various aspects of space missions.

19. Perform a multivariate analysis of variance (MANOVA) to analyze mission status based on multiple variables.
20. Conduct geospatial analysis to identify regions with the highest frequency of space missions