# SPACE PROGRAM ANALYSIS

(Project Insights using Tableau)

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**Topic:** Space Mission. This dataset was chosen to create analytics on how various previous Space Programs have turned out to be and everyone knows about the importance of Space Programs in the coming time. We are on the verge of exploring the Universe and may enter the 'Space Era' soon. So, looking at the importance of this topic, I decided to fetch this Dataset and tried to justify it with my analytics.

**Source of Data:** Kaggle.

The URL: https://www.kaggle.com/agirlcoding/all-space-missions-from-1957

**Relevance of Data:** The data, roughly accumulated, includes all the space missions since the beginning of Space Race (1957).

**What kind of Analytics/ Analysis are you carrying out:** Descriptive Analytics.

I believe understanding the data of this may help us understand where and how the missions are being dominated by some companies while understanding the race and the urgency which causes some companies to manufacture rockets in bulk.

**Describe an abstract of your problem statement**: My Problem statement is to understand and portray the Space Missions around the world.

**What insights are you planning to provide:** I plan to show basic data and visuals to make the reader understand about the basic and show the numbers which are already staggering due to the race to dominate Space.

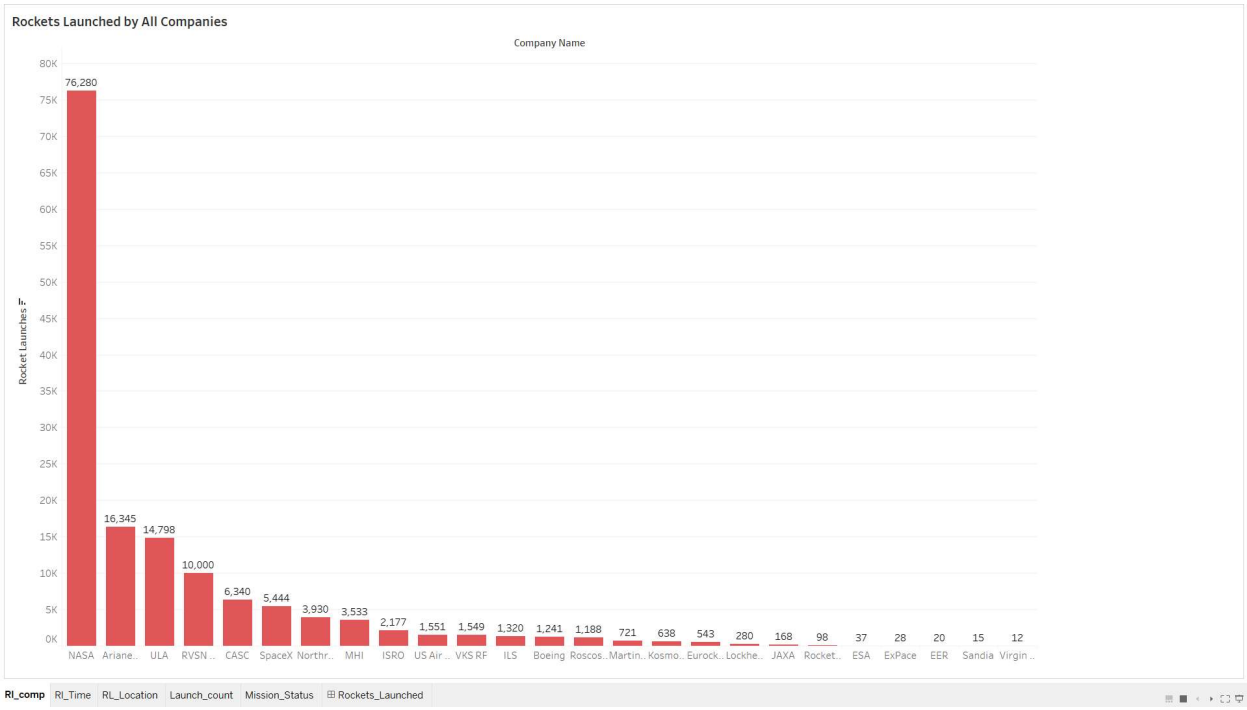
**Selection of Visualisation. Provide a minimum of 5 visualisations, however, justify the nature of selection and relevance of each visualisation chosen and what insight it may provide.** I have made the following Dashboard using Tableau. The sheets were developed to Show the Number of Space mission in according to their Company Name and the Location of the Launch. I have included the Launch Status to understand the efficiency of an organisation/Company. The Mission Status is also included to show the Active status of Rockets. The graph which shows the total number of Space Missions by all companies combined over the course of years(1957-2020).

These Visualizations were chosen so that we can do a Descriptive Analytics on it.

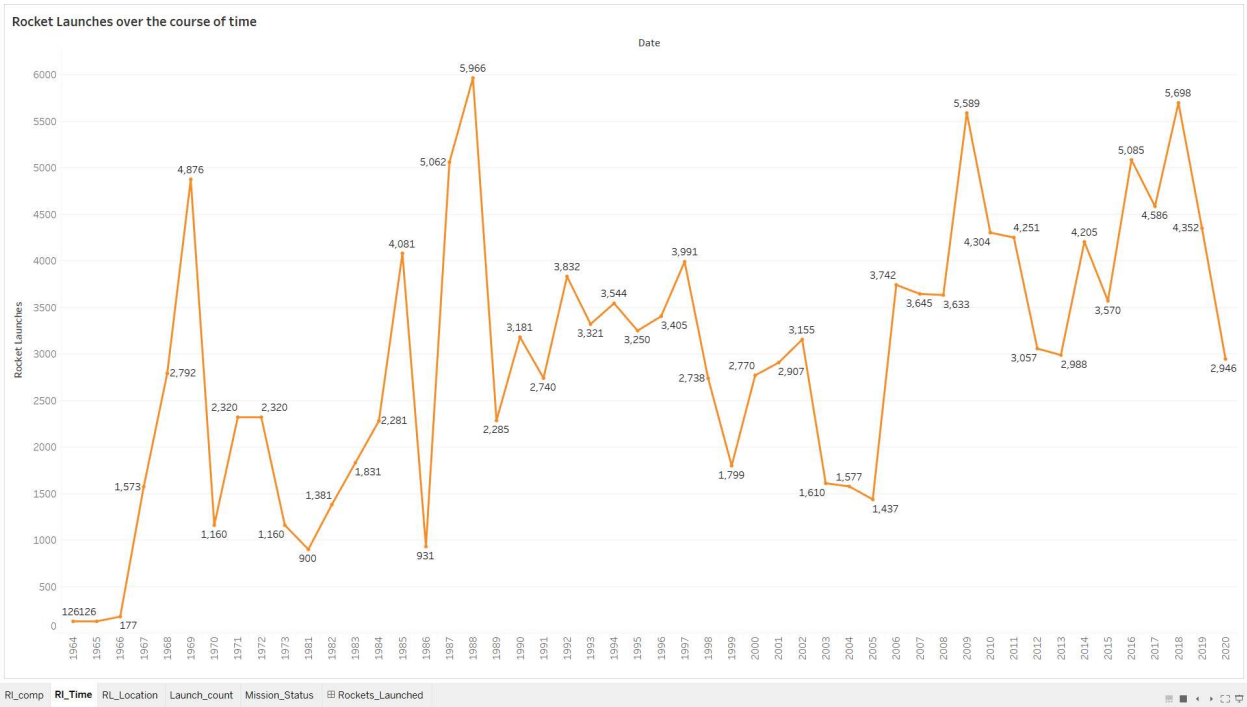
The Visualizations are shown as below:

## 1.Rockets launched by all companies.

The Bar graph below suggests us that NASA has the Maximum Number of Launches when compared to other organisations. This Shows the Dominance of NASA in the number of Launches done in the course of time.



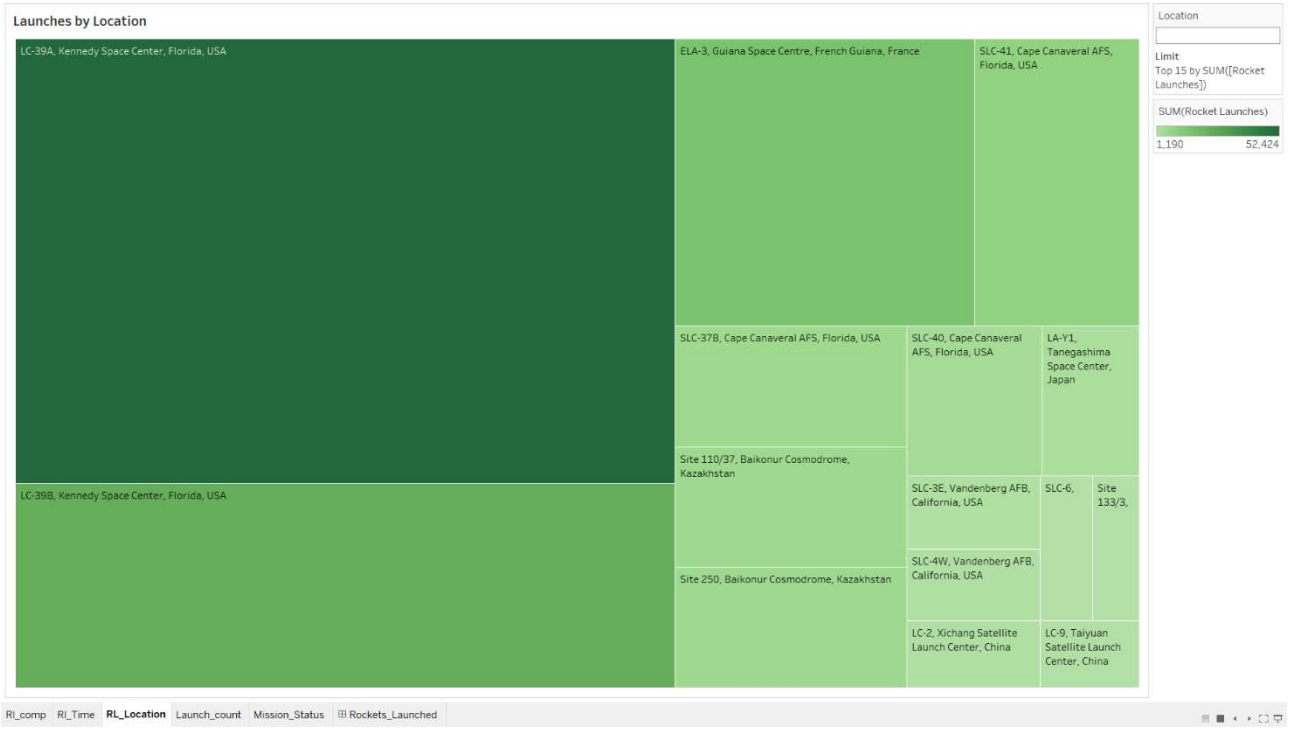

## 2. Rocket Launches over the course of time.



The Line graph above depicts the total launches by all organisations done yearly. The Rocket Launches were done maximum around 1980s and 2010s. There was a drop in launches during the 1990s and 2000s due to financial crisis and crippling economic growth. In the year 2020, even though the world is facing a pandemic due to virus Covid-19, the Rocket launches were roughly done in the sweet spot.

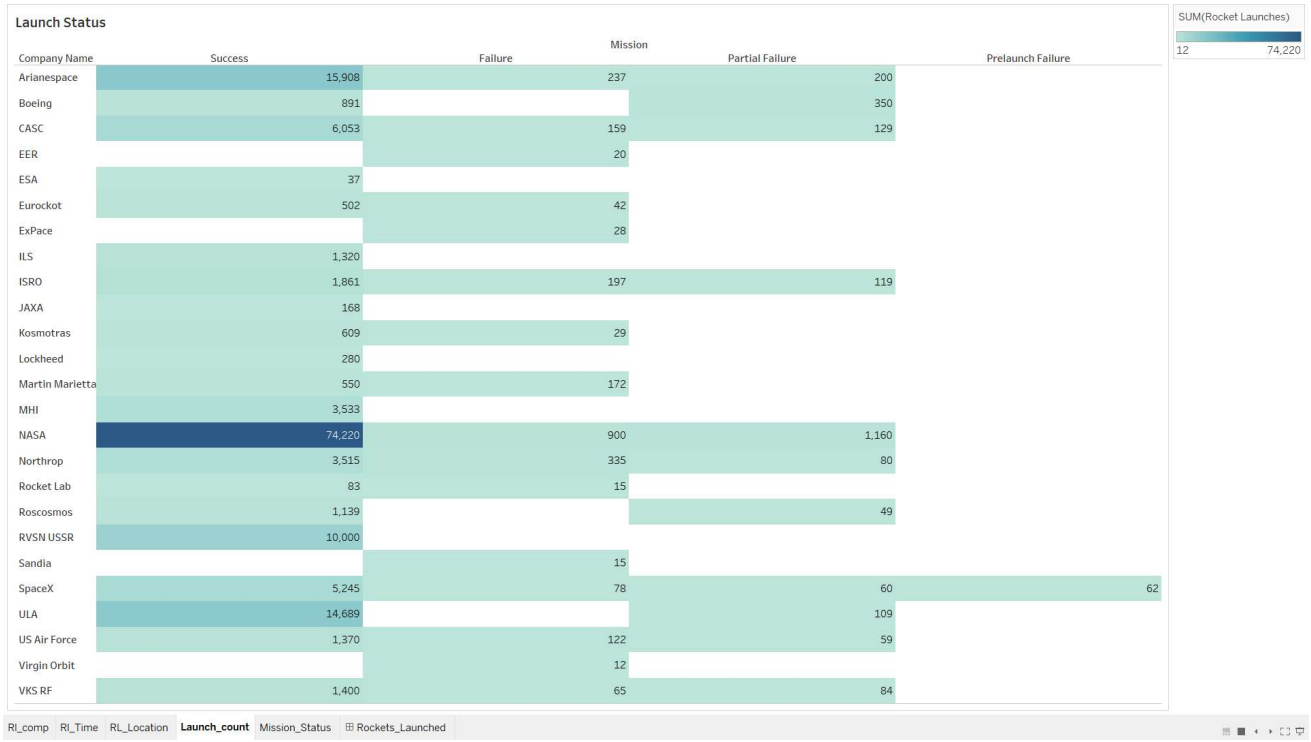
### 3.Launches by Location

The visualization below shows us the Location of Rocket Launches of top 15 launches in descending order. The Kennedy Space Center in USA comes out to be at 1st and 2nd Position. USA continues to dominate in this field too. ISRO's location , First Launch Pad, Satish Dhawan Space Center, India, comes at the 17th position worldwide, with 1061 launches.

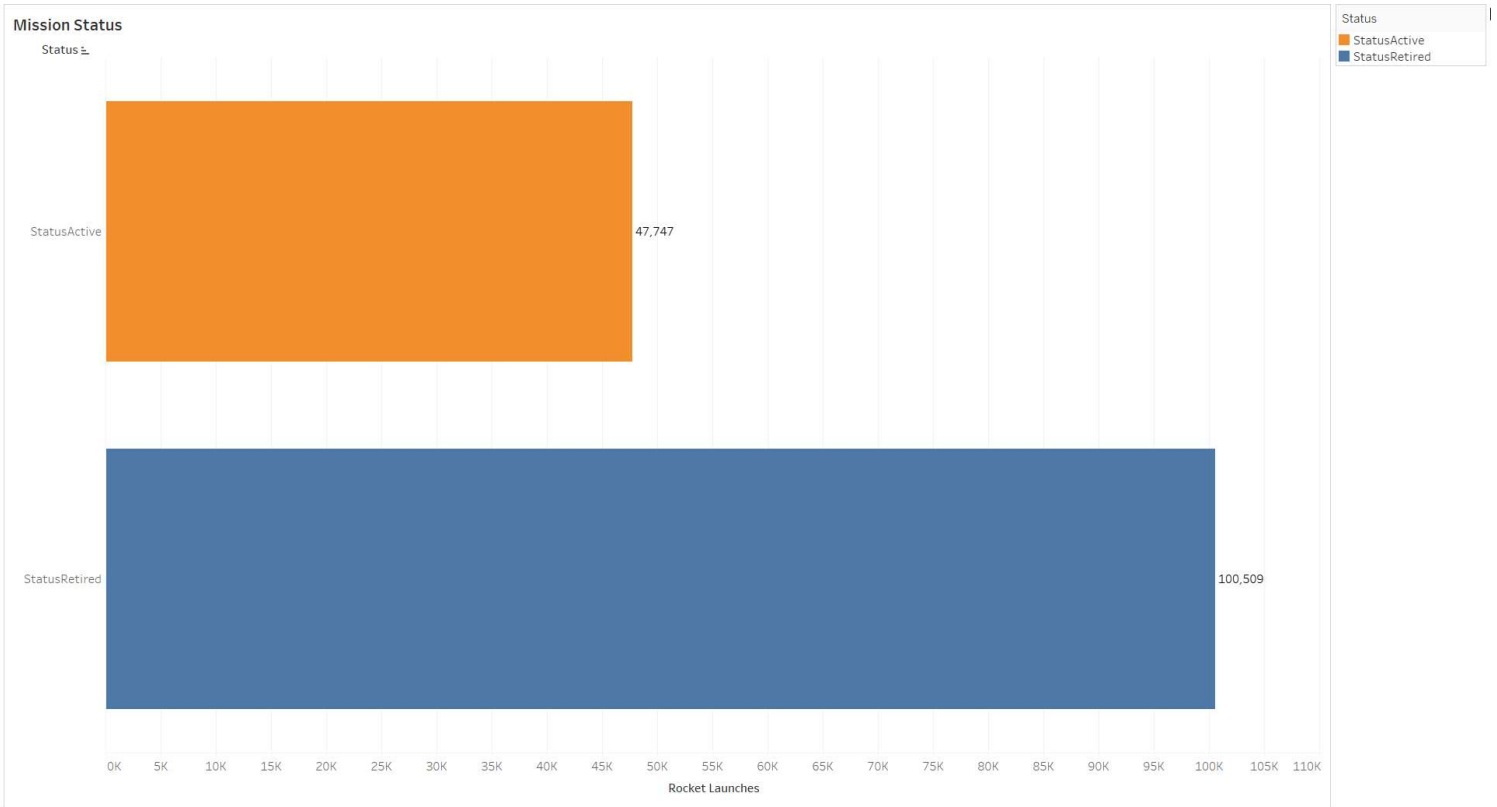



### 4.Launch Status

The visualization below suggests us to see that NASA has launched the maximum number of Rockets compared to all other companies and it has the best success rate even though it has the highest number of failures. SpaceX is the only company to have Prelaunch Failure due to its race to colonize Mars and its efforts to implement new ways for the rockets to be reused after a Mission.




## 5. Mission Status



The visualization tells us that the Satellites and Rockets launched during Space Journey, almost twice the number of orbiters is retired than the number of orbiters that remain active. This adds up the Space Junk revolving around us and increases the debris in space.

**Conclude by providing key takeaways of the sector/company/ nature of selected area of the project report.**

Space Technology and its analysis is important because it is the most important thing, we, as humans, can pursue about. We were not made for Space exploration, but we go there anyway. There are currently more than 7.8 billion humans, which is a lot. However, we are all crammed together on this ONE BLUE PLANET. If something happened to Earth, our species could be wiped out. For example, the a forementioned asteroid impact. Colonizing other bodies in the solar system is a way to create a 'backup' of humanity that will survive no matter what happens to Earth.

The NASA earth Science program provides information about the Earth that plays a vital role in our scientific advancement, our national security, and the American economy.

ISRO, is emerging as a leader in launching other nations' satellites. It gets its fierce competition from US entrepreneur Elon Musk's SpaceX corporation and their reusable rockets. India has launched almost 270 satellites from 32 countries using its PSLV rocket, while SpaceX Falcon 9 has only launched just over 100.

Space is our new destination and our oldest companion. Thus, we should continue our Space programs and fulfil our the most fundamental destiny as humans - Exploring for Survival.