

A climber in a yellow jacket rappels down a steep, rocky mountain face at sunset. The sky is a warm orange and yellow, contrasting with the dark blue of the mountains. The climber is attached to a rope and is looking back over their shoulder.

Himalayan Climbing Expeditions dataset

-How to succeed in an expedition?

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Introduction to Himalayan Climbing Expeditions Dataset

- The Himalayan Database contains the records for all expeditions that starts from the Nepal Himalaya. The database is based on the expedition archives of Elizabeth Hawley, a longtime journalist based in Kathmandu, and it is supplemented by information gathered from books, alpine journals and correspondence with Himalayan climbers.

Average
Hight Point
Meter for all
expeditions

- 7408.9238190954775 meters

Average Highpoint Meters for Different Seasons

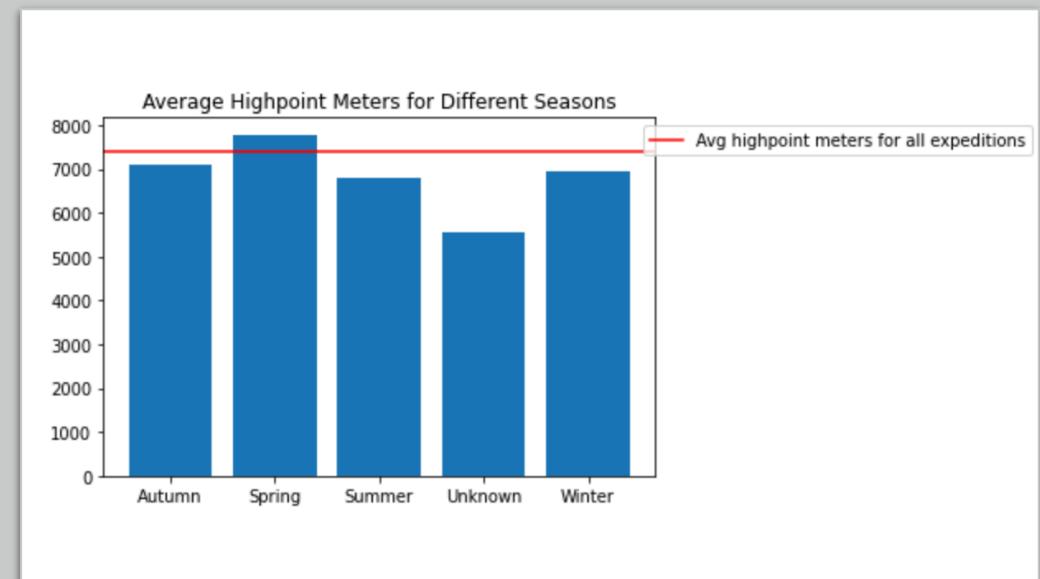
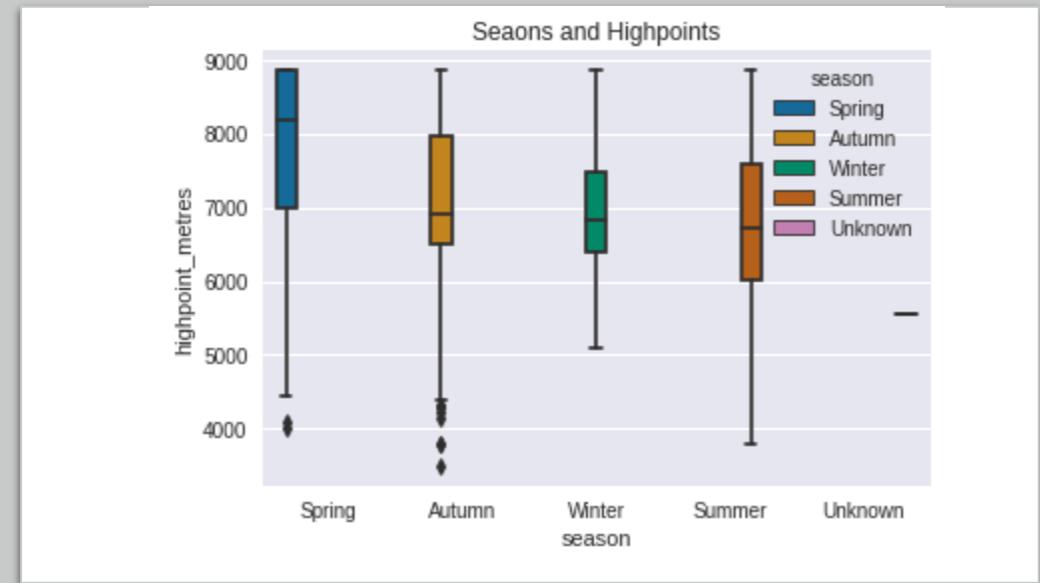
Assumption:

Warmer seasons tend to have higher average highpoint meters.

Trend Observed:

Spring has the highest average highpoint.

This is because the optimal climbing season is from April to May.*



*Culture Trip, 'Heavenly Peak: A Guide To the Best Times To Visit Mount Everest,' Available at: <https://theculturetrip.com/asia/nepal/articles/heavenly-peak-a-guide-to-the-best-times-to-visit-mount-everest/>

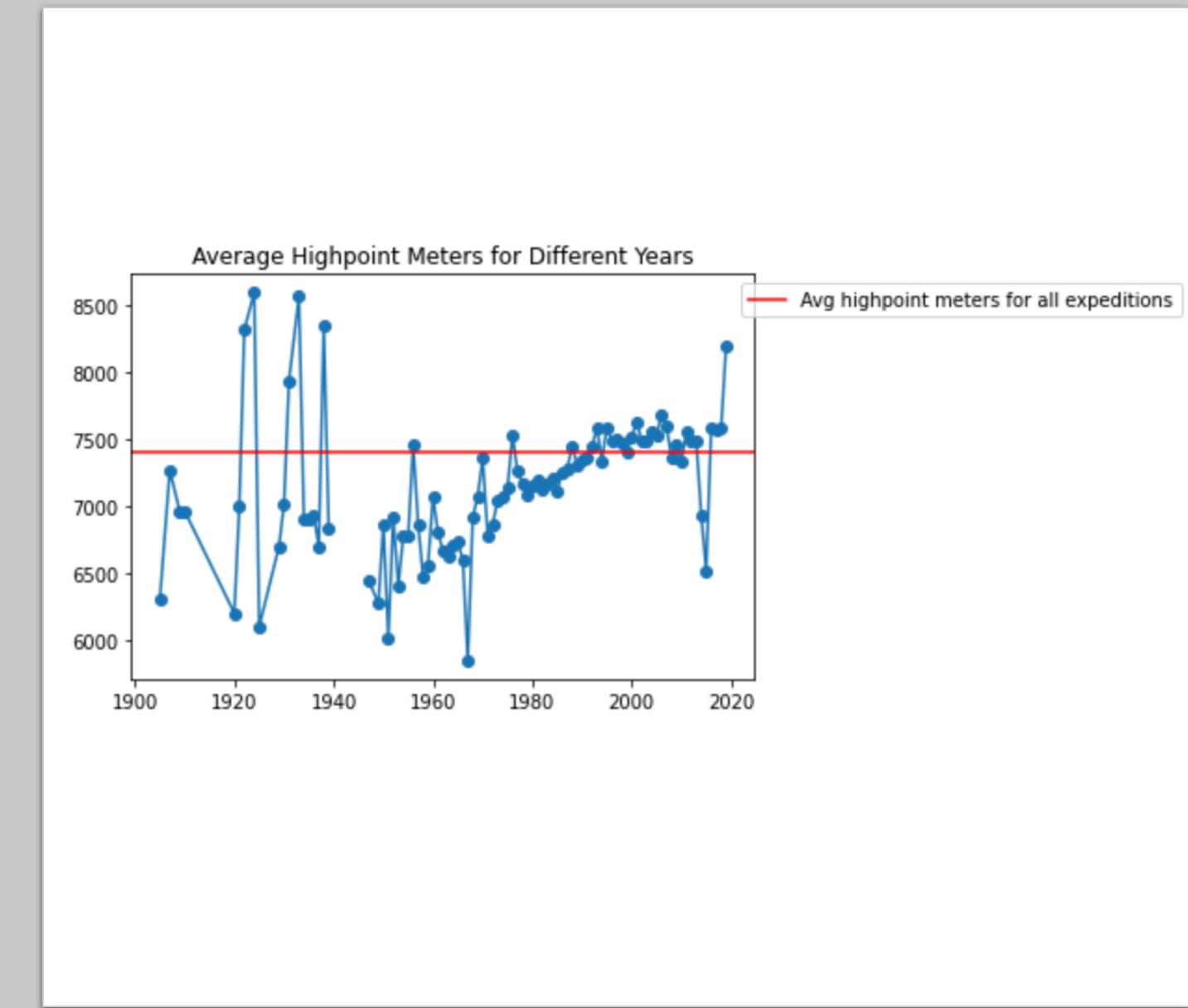
Average Highpoint Meters for Different Years

Assumption:

As technology develops and experience accumulates, average highpoint meters increase over time.

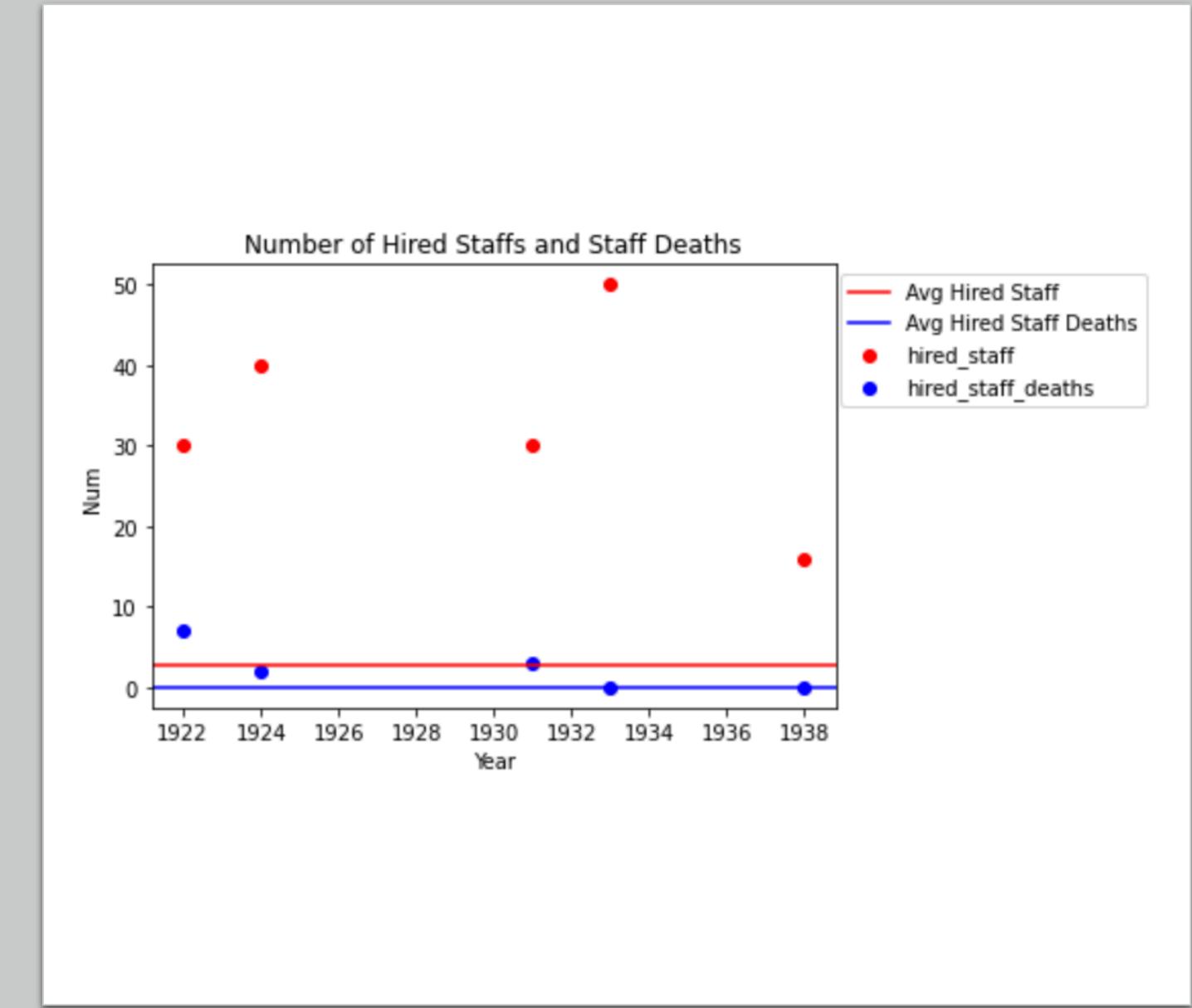
Trend Observed:

The average highpoints were extremely high during the 1920 – 1940 period. There is no expedition data between 1940-1947 due to the World War 2. Afterwards, although more expeditions are taken each year, the average highpoints adversely decreased. After COVID-19, both China and Nepal has banned all expeditions.



Analyzes the 5 Remarkable Highpoints during 1920 - 1940

- The main difference between these 5 expeditions and the other ones is the number of staffs hired.
- As shown in the graph, the number of hired staffs for these 5 expeditions are far above the average for all. Maybe the help from the hired staff facilitated the expeditions significantly.



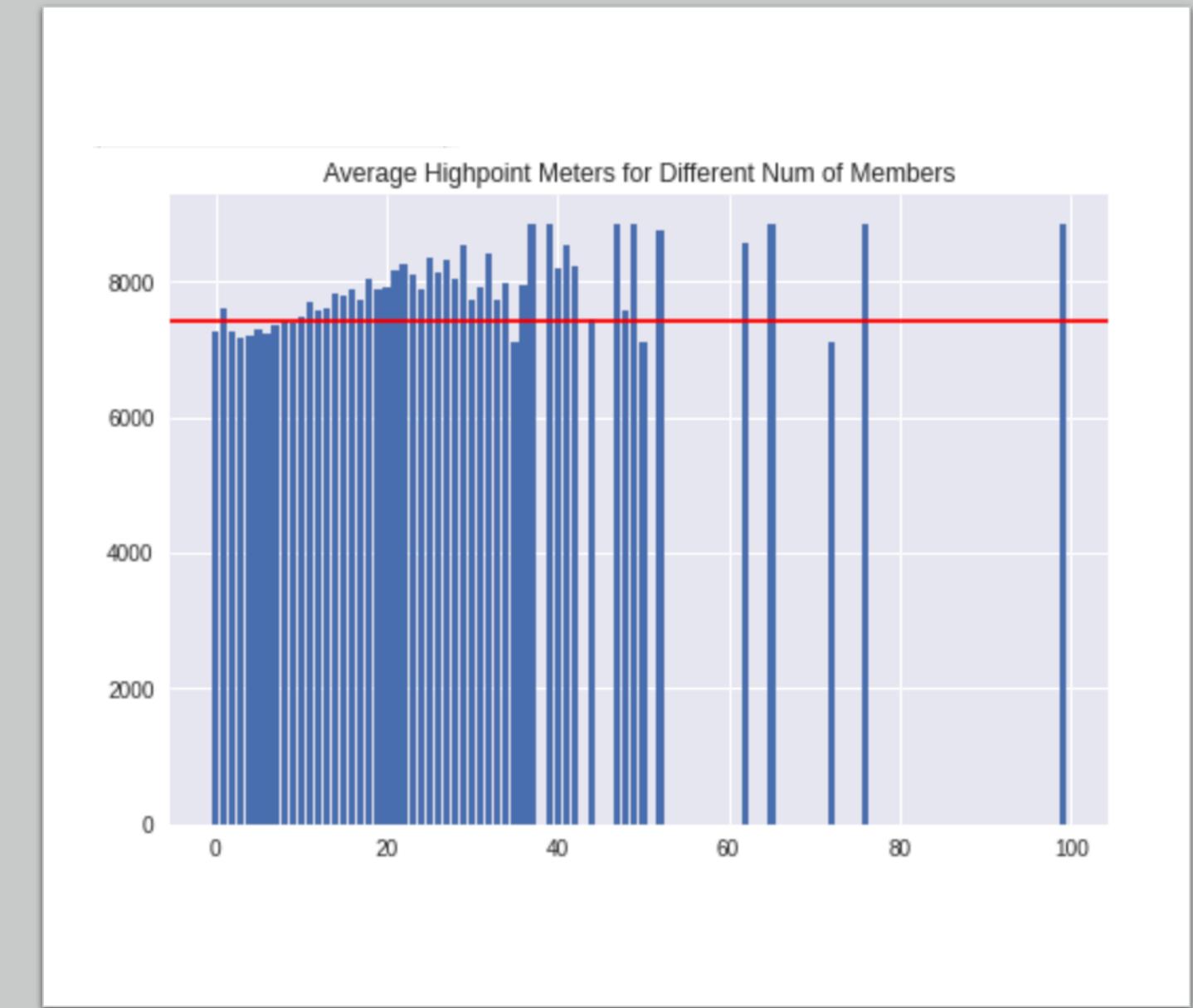
Analyzes the 5 extreme highpoints during 1920 - 1940

- Other reasons

- Climbing routes changed after World War 2 since Nepal opens its border.*
- For the period between 1920 to 1940, that 5 expeditions were the only trips for each year. As a result, the average is very high.
- After the WW2, although the new climbing record was made and the height of mount Everest kept increasing, the average decreased because the number of expeditions increased greatly. Those failed trips lowered the average highpoint meters. As the number of expeditions increases, the average highpoint meters get closer to the average.

Average Highpoint Meters for Different Num of Members

- Assumption:
- There might be an optimal number of members for climbing.
- Trend Observed:
- As the number of members increases, the average highpoint meters increases.



Average Highpoint Meters and Oxygen Usage

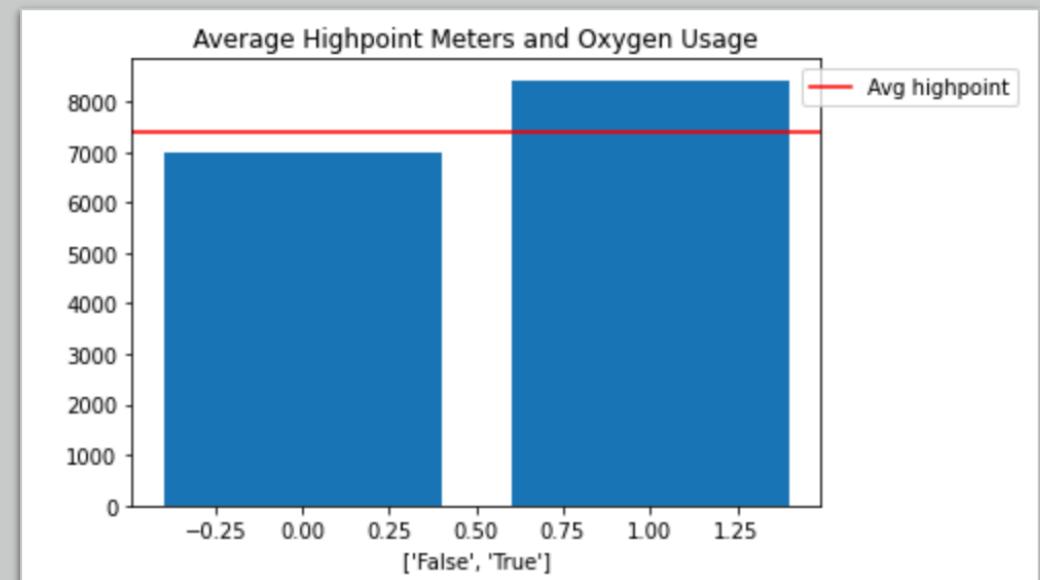
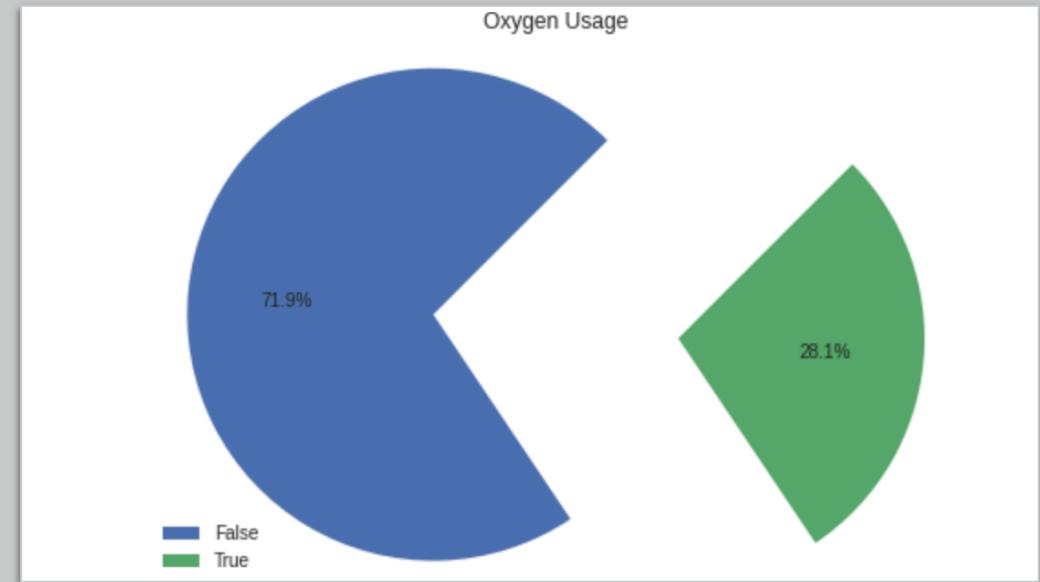
Assumption:

Oxygen usage facilitates the expeditions.

Trend Observed:

The assumption is approved. Only 28.1% of the expeditions used oxygen. Oxygen usage significantly improved the highpoint meters.

However, this difference in average highpoint meters might because oxygen-using expeditions has smaller sample size.



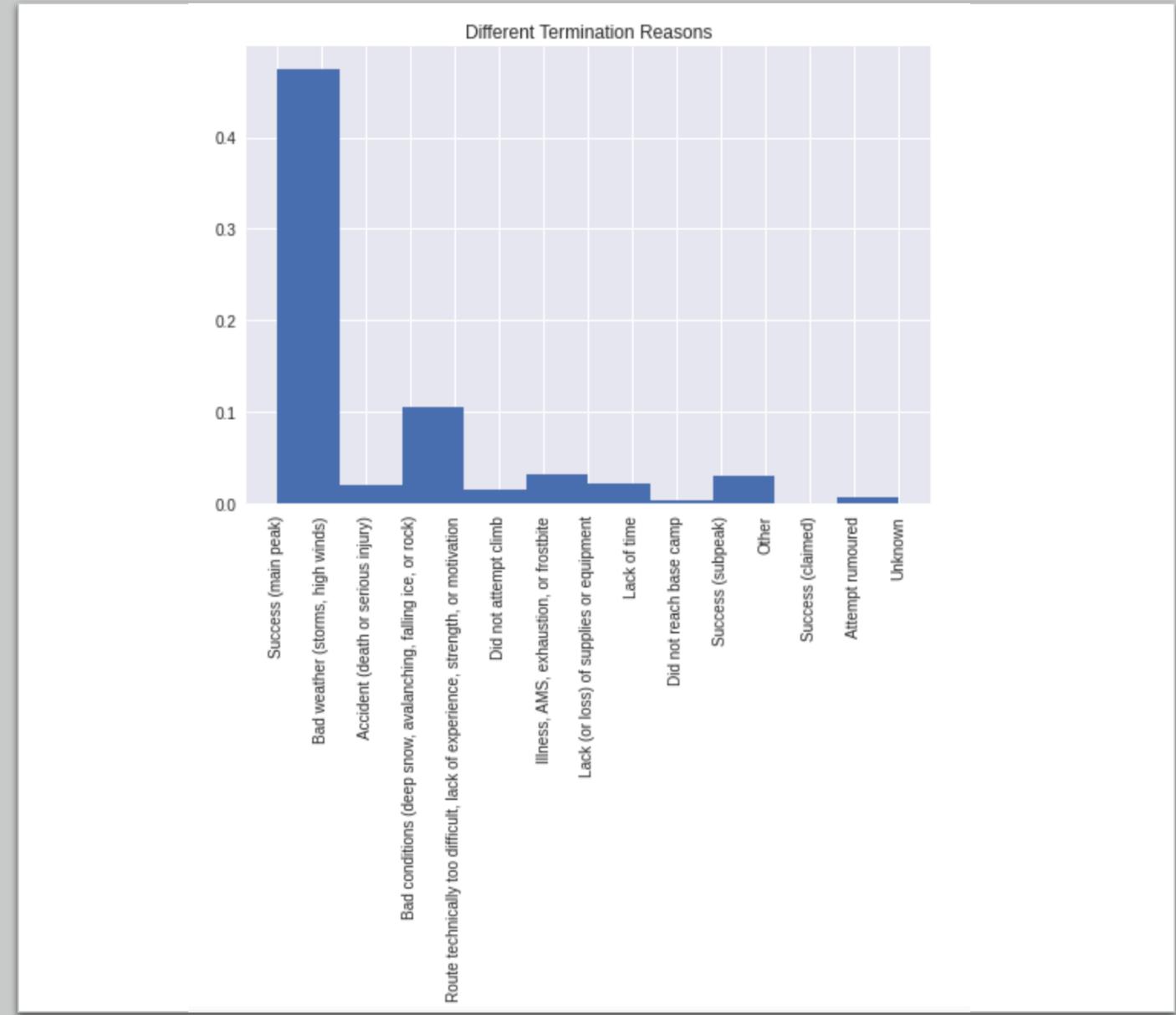
Different Termination Reasons

Assumption:

Bad weather is the biggest reason for terminating the expedition.

Trend Observed:

Except for success, bad weather and conditions are the top termination reasons.



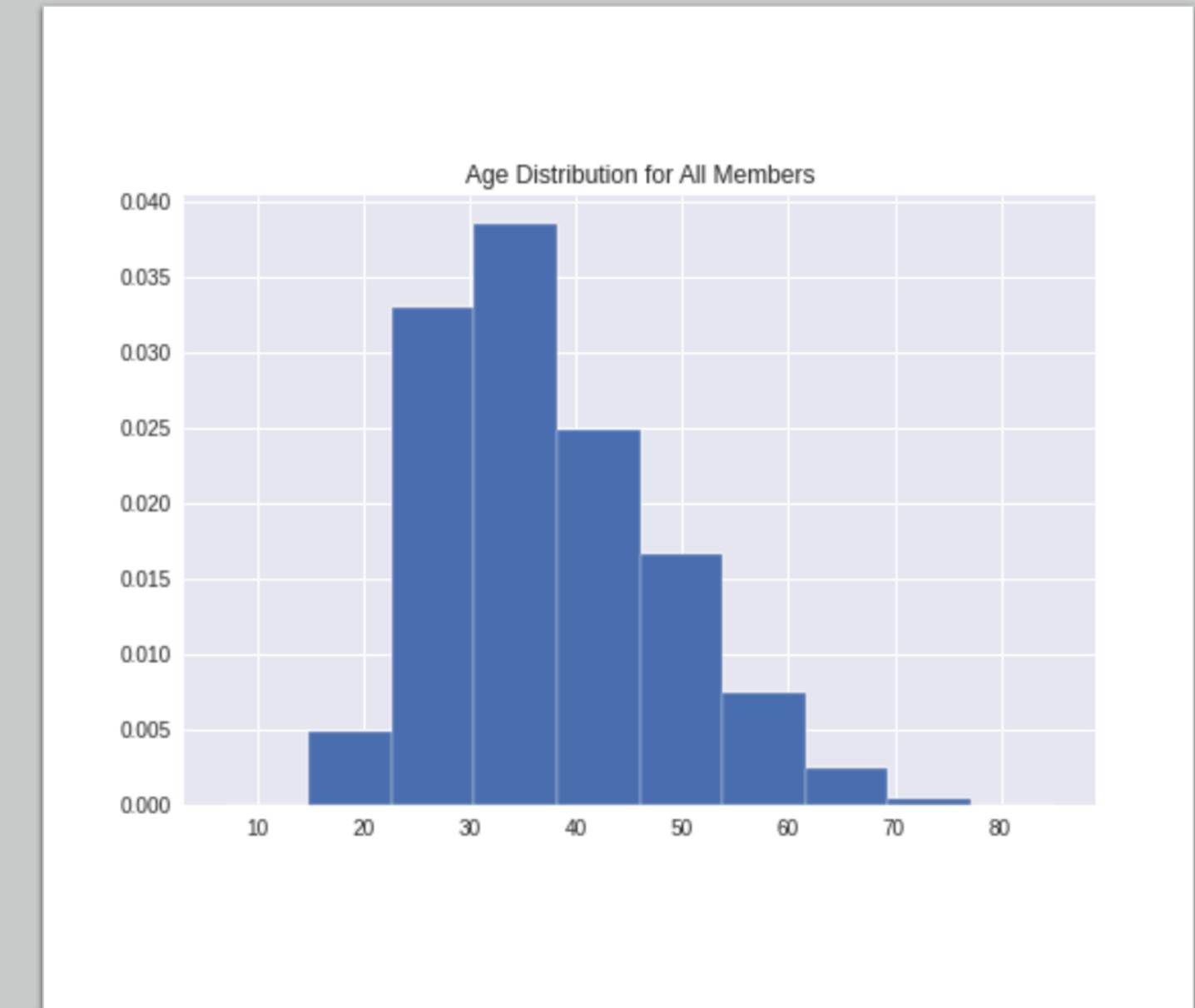
Age Distribution for All Members

Assumption:

Younger people should have an advantage in terms of physical conditions.

Trend Observed:

Most of the members are at their thirties. Members at this age range must have sufficient climbing experience and optimal physical conditions.



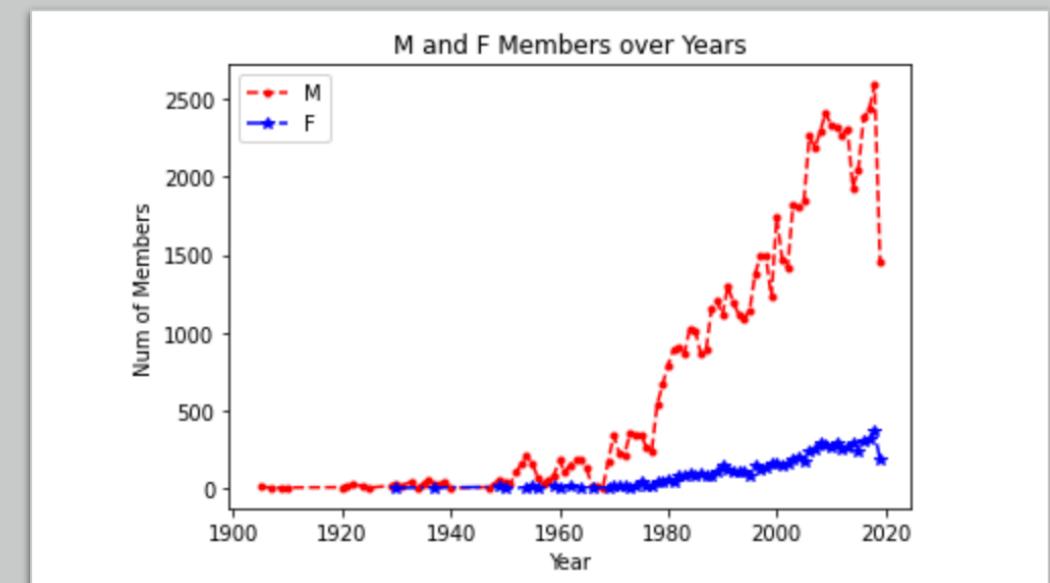
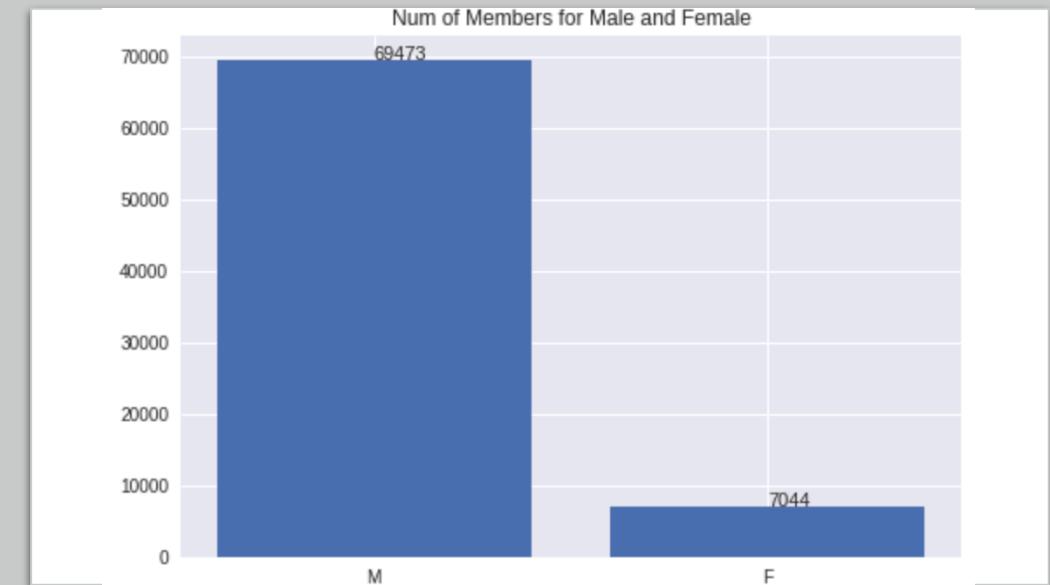
Num of Members for Male and Female

Assumptions:

More men had climbed the Himalaya.

Trend Observed:

Significantly more men went on an expeditions.
The number of both male and female member increases over the years. But the growth of male members is much faster.



How to succeed in the expedition?

- 1. Start in spring
- 2. Use oxygen
- 3. Have many team members
- 4. Avoid bad weathers
- 5. Choose easy routes
- 6. Bring adequate equipments
- 7. Start your trip when you are aged between 20 – 40
- 8. What else?

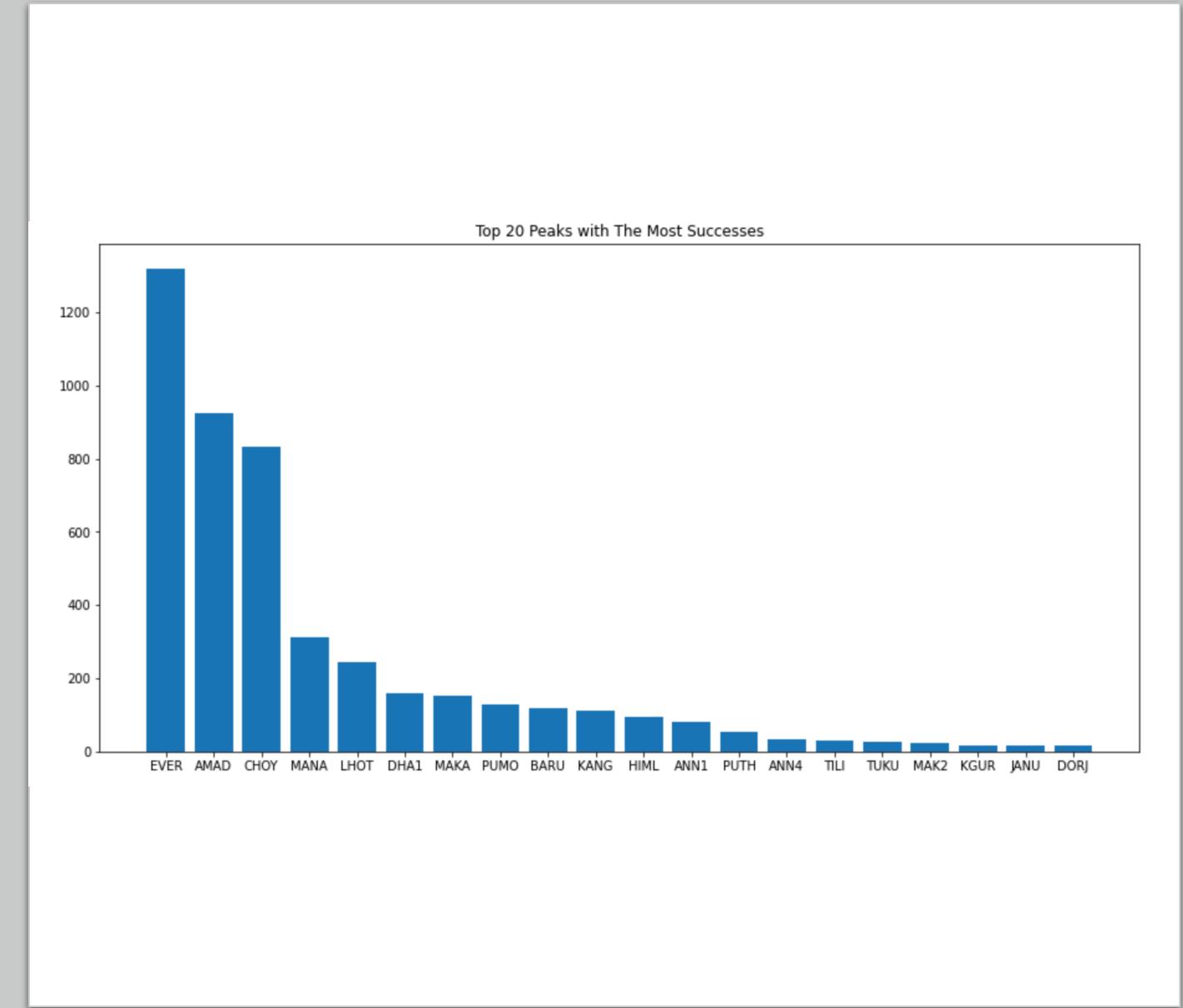
DF - Successful Expeditions

- Filter to get successful expeditions

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successexp=expeditions.loc[expeditions['termination_reason']=='Success (main peak)']
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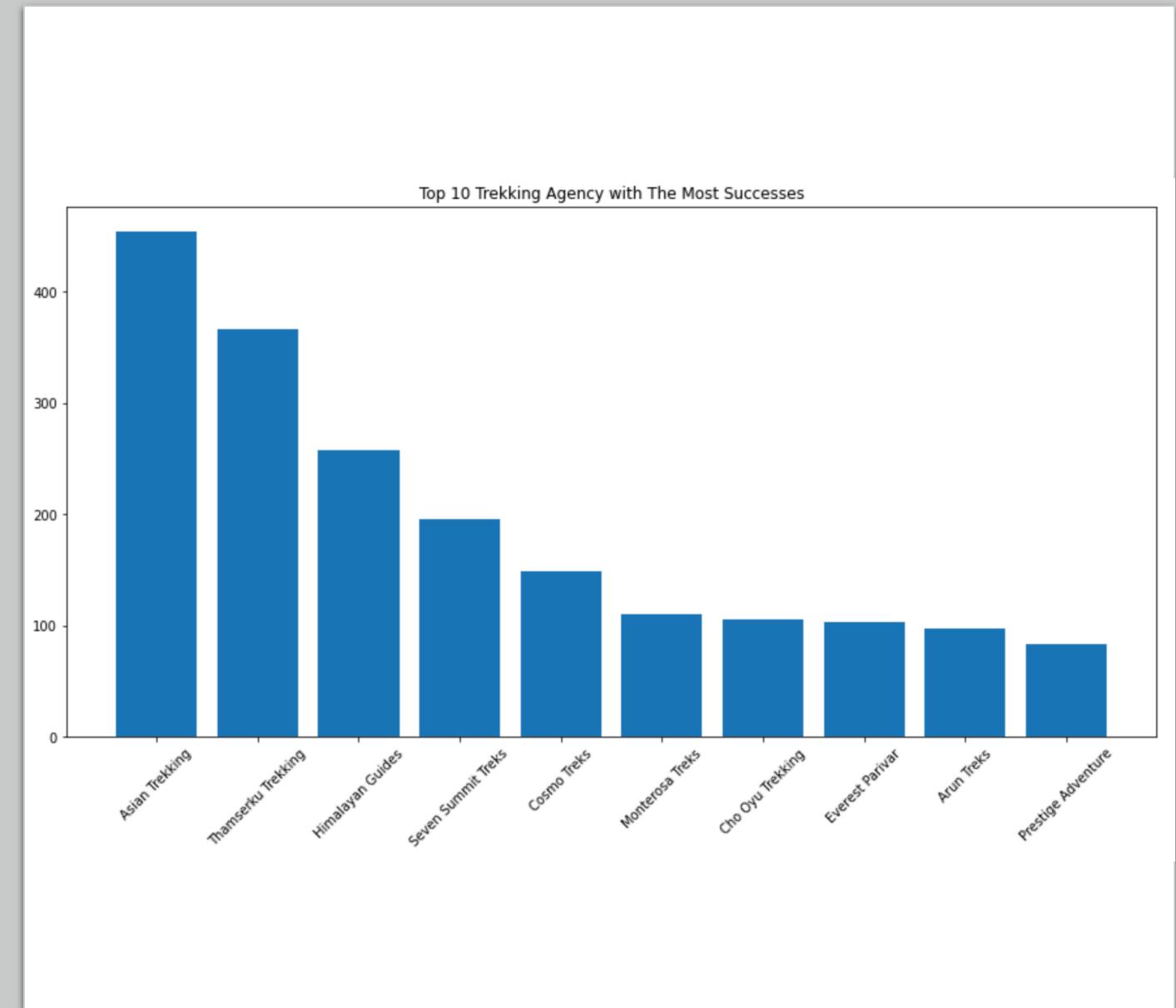
The 20 Peaks with Most Successes

- Most successful expeditions are on the Mount Everest.
- This mainly because climbers want to conquer the highest mountain in the world. Consequently, more expeditions were taken are on the Mount Everest. More tips and routes are examined, increasing the chance of success.



Top 10 Trekking Agency

- To improve their chance of success, many teams chose to hire a trekking agency.
- If you want to hire one, Asian Trekking is a good choice since it helped over 400 successful expeditions.



Other Expedition Tips

- Choose Mount Everest
 - Hire Asian Trekking
- to be continued