

Paris 2024 Olympic Summer Games Report

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Introduction

In this project, we analyzed the Paris 2024 Olympic Games dataset to design a comprehensive and interactive dashboard using Power BI. The analysis focused on key themes such as Medal Distribution, Gender Representation, and Venue and Event Allocation. These themes were explored to provide actionable insights and highlight significant patterns and trends within the data, contributing to a deeper understanding of the event's dynamics.

Datasets Utilized

- Medalists
- Athletes
- Schedules
- Events
- Teams
- Venues

Data Integration

The data was integrated from a diverse set of tables, and various data cleaning and organizational techniques were applied to ensure consistency. We selected datasets related to athletes, medalists, and medals, which were combined into a cohesive table focused on the 2024 Olympic medalists, titled "Winners." This integration allowed us to address the following key questions:

- What was the overall distribution of the medals?
- What does the distribution of medalists across the globe look like?
- How did the medal distribution vary between different sports?
- Are younger athletes more likely to be medalists than older ones?

Non-Integrated Data

On our additional pages, we conducted separate data queries without integration. The primary focus was on athletes, with key themes including gender distributions, identifying top-performing athletes, and geographical distributions. The data queries allowed us to address the following key questions:

- Who were the top athletes, and what did their medal distribution look like?
- What does the gender distribution look like across sports?
- Does having relatives who are also athletes impact your likelihood of winning a medal?
- What is the team distribution between countries?
- What were the average durations of the different events?
- Did certain venues have more canceled events than others?
- Were certain days more popular than others for events?
- Which venues were used for which sports?

Research Questions and Key Findings

Integrated Data

What was the overall distribution of the medals?

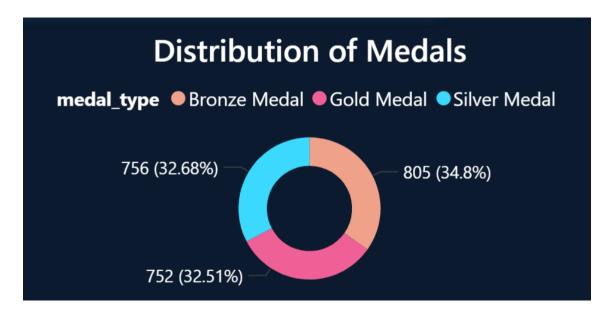


Figure 1: Distribution of Medals

The overall distribution of medals was fairly even. However, there were slightly more bronze medals compared to gold and silver. Upon further investigation, we discovered that in many combat sports, there is no "Bronze Medal Match," and both semifinalists are awarded a bronze medal. In contrast, the final match awards gold to the winner and silver to the second-place finisher.

What does the distribution of medalists across the globe look like?



Figure 2: Medalists by Country

We can see that the concentration of medals was in Europe. However, China and the United States specifically won a lot of medals as well.

How did the medal distribution vary between different sports?

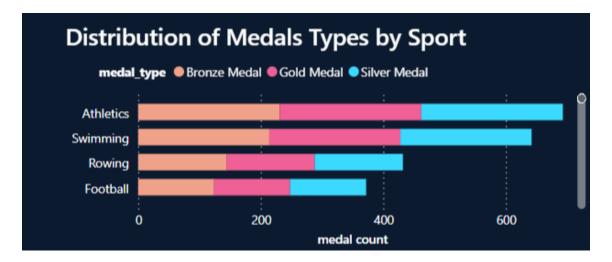


Figure 3: Medal Distribution by Sport

Our plot shows that the distribution of medals across sports is roughly equal in thirds. However, the number of medals varies between sports, which is understandable since each sport has a different number of events.

Are younger athletes more likely to be medalists than older ones?

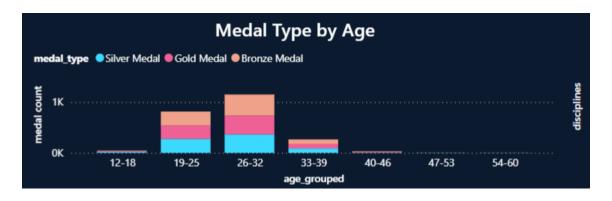


Figure 4: Medal Distribution by Age

From our plot, we can see that athletes aged 26 to 32 won the most medals. However, looking at proportions of medals, we see that if you had won a medal given you were 19-25, you were more likely to win a silver or gold medal than if you were 26-32. This means that while middle-aged athletes are the most likely to win medals, younger ones are more likely to perform better given they won a medal.

Non-Integrated Data

Who were the top athletes, and what did their medal distribution look like?

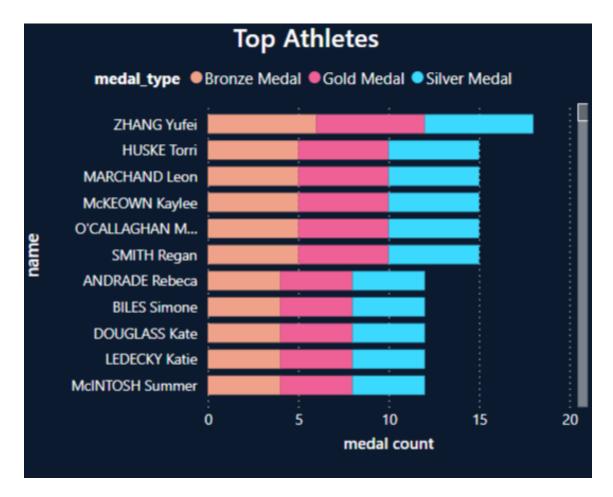


Figure 5: Top Athletes

The plot shows that the top athletes got an equal amount of medals, except for Yufei Zhang, who got more bronze medals than gold or silver.

What does the gender distribution look like across sports?

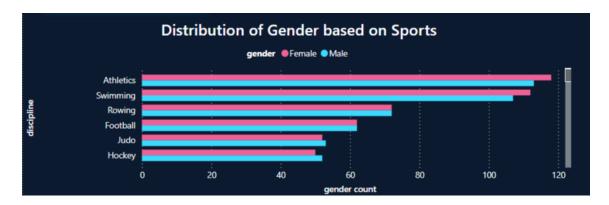


Figure 6: Gender Distribution Across Sports

The plot reveals that, for the most part, sports had a balanced representation of men and women. However, athletics and related sports, such as cycling, had a higher number of female athletes, while contact sports and martial arts showed a relatively higher participation of males.

Does having relatives who are also athletes impact your likelihood of winning a medal?

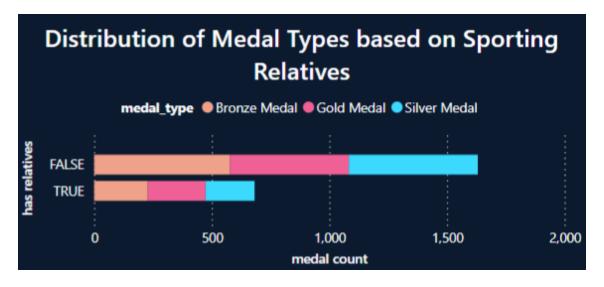


Figure 7: Impact of Athlete Relatives on Medal Winning

The plot shows that athletes with relatives who were also athletes had a slightly higher chance of winning a gold medal compared to those without sporting relatives.

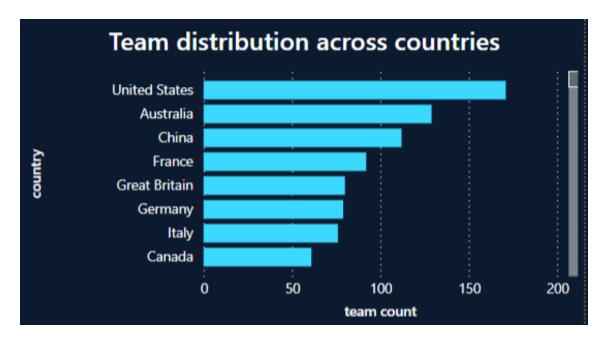


Figure 8: Team Distribution by Country

The plot shows that most of the teams were sent from North America and Europe, specifically with the exception of Australia and China.

What were the average durations of the different events?

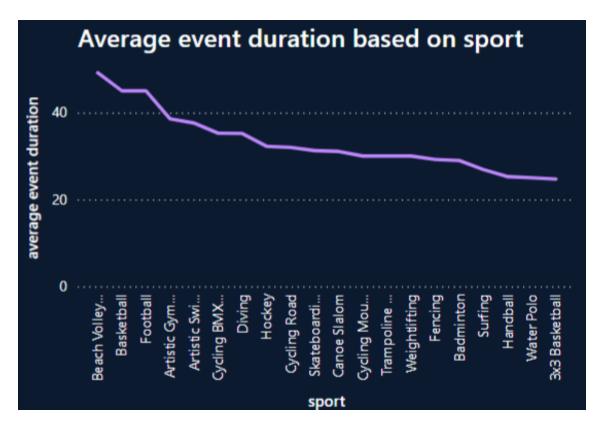


Figure 9: Average Event Durations

We can conclude that all events were below or around 1 hour long, with contact and combat sports on average having shorter durations than other sports.

Did certain venues have more canceled events than others?

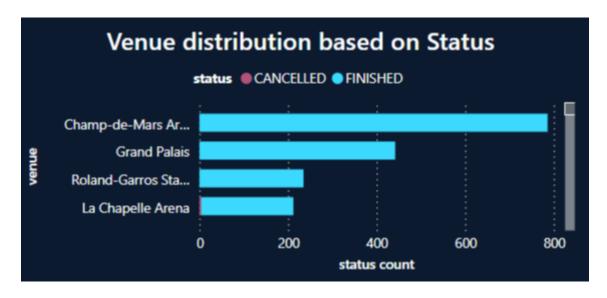


Figure 10: Canceled Events by Venue

Out of all the venues, only 3 had canceled events. We looked further to find that

these venues all had outdoor events, which is understandable as to why any canceled events would have been there, likely due to poor weather conditions.

Were certain days more popular than others for events?



Figure 11: Event Popularity by Day

The plot indicates that there weren't particular popular dates with a clear pattern. However, a noticeable trend is that there was a period with significantly fewer events at the start of the Olympics, followed by an increase in events.

Which venues were used for which sports?

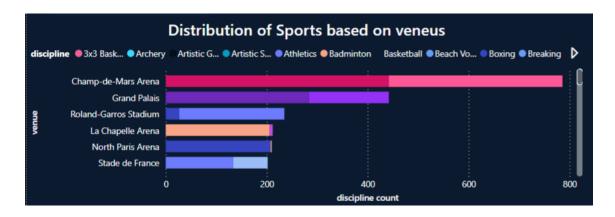


Figure 12: Venues Used for Different Sports

We can conclude from our plot that certain venues were preferred for combat sports such as the Champ de Mars Arena and Le Grand Palais, while others were used more multipurposely, such as the Bercy Arena.

Conclusion

By integrating and analyzing data on the Paris 2024 Olympic Games, we revealed key insights into medal distribution, athlete performance, gender representation, and venue allocations. Our dashboard effectively visualizes these trends, making it easier to understand the dynamics of the event.

Bibliography

- [1] Paris 2024 Olympic Games Dataset, Official Data Repository.
- [2] Power BI Documentation. Microsoft Learn.