

Research Questions for the integrated Datasets

1. How does the average age of athletes differ across various regions or countries?

- Answer:
 - The bar chart shows that North America has a significantly higher number of athletes per country code compared to other regions. Europe follows with a notable count, while Asia and South America have fewer athletes. Oceania, Eurasia, Africa, and the Middle East show the lowest representation, highlighting North America's much larger athlete distribution.

2. Which sports disciplines have the highest and lowest number of athletes per country code?

- Answer:
 - Based on the visual, the sports disciplines with the highest number of athletes per country code are Athletics, Sprint, and Artistic Gymnastics. On the other end, the disciplines with the lowest number of athletes per country code are Cycling Road, 3x3 Basketball, and Triathlon. This indicates a higher popularity or participation rate in Athletics and related sports, while sports like Cycling Road and Triathlon have fewer athletes per country code.

3. What is the trend in the number of athletes participating in individual vs. team sports across different regions?

- Answer:
 - Individual sports such as Athletics, Swimming, and Rowing have higher participation rates compared to team sports like 3x3 Basketball. Regions like North America and Europe show a particularly strong representation in these individual sports. In contrast, team sports have relatively lower participation numbers across these regions. This trend suggests a regional preference for individual sports, potentially influenced by factors such as infrastructure, funding, and cultural emphasis on individual athletic achievement.

4. How does the number of athletes with coaches compare across different sports in various regions?

- Answer:
 - The dashboard indicates that individual sports such as Athletics and Swimming have a higher number of athletes with coaches, particularly in regions like North America and Europe. In contrast, team sports such as Football and Rugby Sevens have fewer athletes with coaching support. This pattern highlights a regional preference and investment in coaching resources, emphasizing the importance of coaching in individual sports compared to team sports.

Research Questions for the normal Datasets

1. What is the distribution of medals by gender across different countries?

- The United States display a balanced distribution, with both men and women contributing significantly to their medal totals but women being slightly better. France, Great Britain and Italy show better results from men over women in medal counts, while China, Australia and Netherlands show a better performance from women than men. As for the genders labeled as X and O (maybe X means non-binary, and O means other), China, Korea and The United States have better performance in X with 6 medals for China and 5 medals for both Korea and The United States, while O has 1 medal for China, 2 medals for the United States none for Korea. On the other hand, O showed better results for Germany, Great Britain and France with 5 medals for Germany and Great Britain and 2 for France. On the other hand, X got 2 medals for Germany and Great Britain, and 1 medal for France.

2. Which disciplines show dominance by specific genders based on the number of medals won?

- disciplines like Wrestling and Boxing are dominated by men, while Swimming and Judo show a more balanced distribution between men and women. Meanwhile, Athletics leans slightly toward women but remains relatively competitive across genders. Gender O and X did not participate in many disciplines, but the highest number of medals for O is won in Equestrian with 18 medals, while the highest number of medals for X was in shooting with 9 medals, but overall X participated and won medals in 10 disciplines while O participated and won medals in only 2 disciplines. This is why X has more medals overall than O.

3. Which disciplines have the highest number of medal-winning athletes, and how does this vary across different countries?

- Among disciplines, Athletics has the highest number of unique medalists with lots of contributing countries with the countries having the most medalists being Great Britain, Kenya and then Canada. In 2nd place there's Swimming with the countries having the most medalists being Australia, China and then Great Britain and Italy having an equal number of medalists of 4. In 3rd place there's Judo with countries having the most medalists being France, Japan and Korea.

4. What are the disciplines with the most medals along with their event types, and what is the relationship between the total medals and unique medalists across disciplines?

- Among disciplines, Athletics has the highest number of medals, having a total of 228 medals (124 from ATH events and 104 from TEAM events) won by 190 unique medalists. Swimming is in 2nd place with 219 medals (84 from ATH events and 135 from TEAM events) won by 125 unique medalists. And what's in 3rd place is Rowing with 144 medals (6 from ATH events and 138 from TEAM events) won by 140 unique medalists. The relationship between the number of total medals and unique medalists is mostly positive. Although sometimes the number of unique medalists gets higher with lower medals (like swimming with 219 medals and 125 unique medalists and then Rowing with 144 medals and 140 unique medalists), for the most part, the chart shows that the number of unique medalists see an increase with higher number of medals.

5. Which countries have the highest number of teams?

- The United States leads with the highest number of teams (170 teams), followed by Australia (129 teams) and China (112 teams). France has 92 teams, while Great Britain and Germany have 80 and 79 teams, respectively. Countries like Italy (76), Canada (61), and Netherlands (59) round out the top contributors, indicating strong team representation across these nations.

6. How are teams distributed across disciplines, and what is the gender distribution?

- Swimming has the highest number of teams, with a strong representation of Male (M) and Female (W) teams. Rowing and Athletics also have significant team counts, with balanced gender representation. Disciplines like Tennis, Sailing, and Cycling Track have fewer teams overall, but still show participation across genders.

7. What is the gender distribution among technical officials?

- The majority of technical officials are Male (652, 63.86%), while Female officials account for 369 (36.14%). This indicates a gender imbalance, with males dominating technical roles.

8. Which disciplines have the highest number of technical officials?

- Boxing has the highest number of technical officials (131), followed by Basketball (90) and Wrestling (77). Other disciplines like Handball, Rugby Sevens, and Football have between 60 and 65 officials each. Disciplines like Diving, Taekwondo, and Beach Volleyball have fewer officials, with counts ranging from 40 to 48.