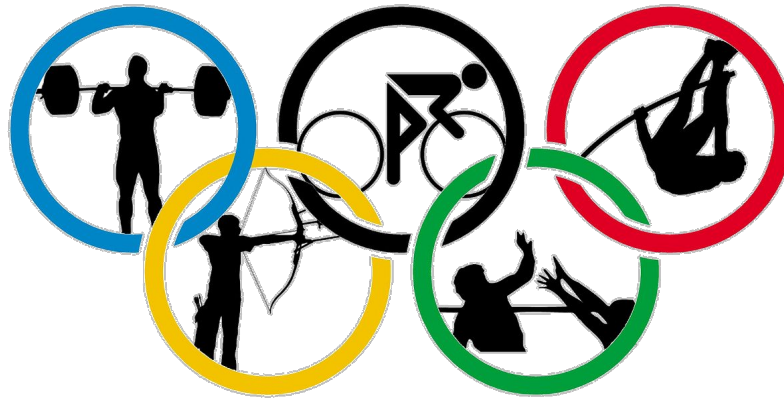


Report out: SportsStats

Introduction

What is really happening in Olympic Games?



Contents

- Review of Questions to Answer/Hypotheses/Approach
- Technical Challenges
- Entity Relationship Diagram (ERD)
- Initial Findings
- Deeper Analysis
- Hypotheses Results

SECTION 1: Questions to Answer?

1. Female and male participants. How this participation develops over the years?
2. Which is the age distribution of athletes and medals?
3. Which is the correlation between first countries in medals in Summer Games and these in Winter Games?

SECTION 2: Initial Hypotheses

1. The athlete with the most medals takes part in an individual sport.
2. There is a correlation between type of medal and age. Gold medal have a little higher average age because of experience its needed for this.
3. The lower a country falls in the ranking, the more divided the medals are by type.

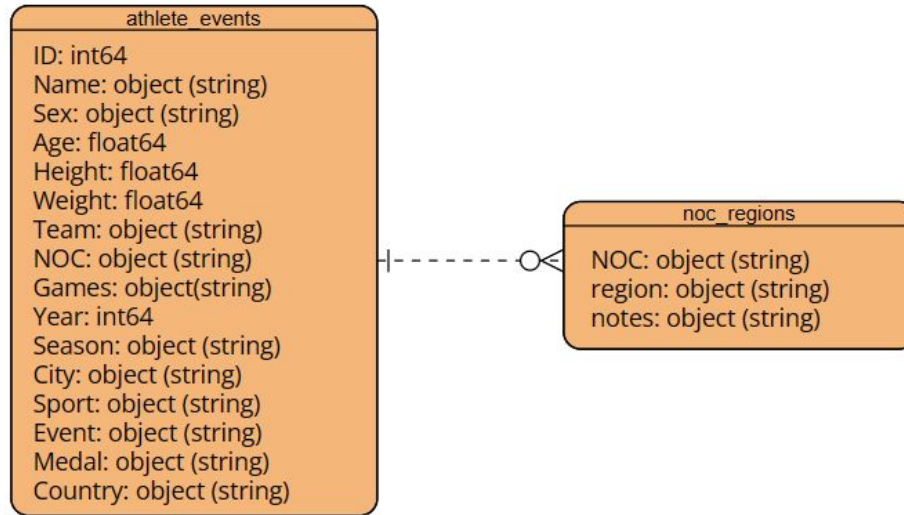
SECTION 3: Data Analysis Approach

1. Calculate stats for athletes, games and countries.
2. Looking for trends and development over the years.
3. Make graphs and visualize data to make more easily understood the data analysis process.

Technical Challenges

All the data we had to manage came to 2 tables. The athlete_events table contains ALL the data for athletes, games, events that athletes take part. One way was to separate these to different tables and the other way, which we chose, was to manage the data as it was with great care to have the right results (i.e. we had to use DISTINCT in some cases).

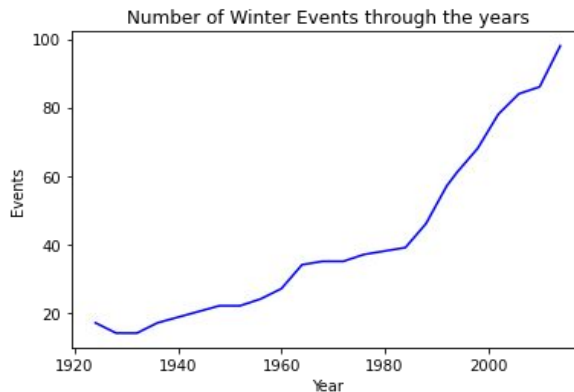
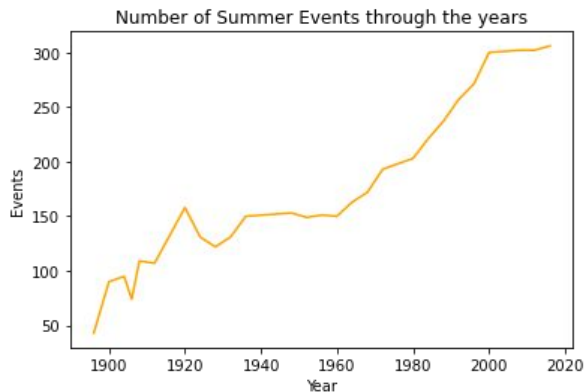
Entity Relationship Diagram (ERD)



Initial Findings

- Number of Summer and Winter Games and average athletes for each Season
- More athletes → More events

	Season	games	average_athletes
0	Summer	29	4026
1	Winter	22	861



Initial Findings (2)

- Top 5 Sports by participants

	Sport	participants
0	Athletics	22071
1	Swimming	8765
2	Rowing	7687
3	Football	6161
4	Cycling	5819

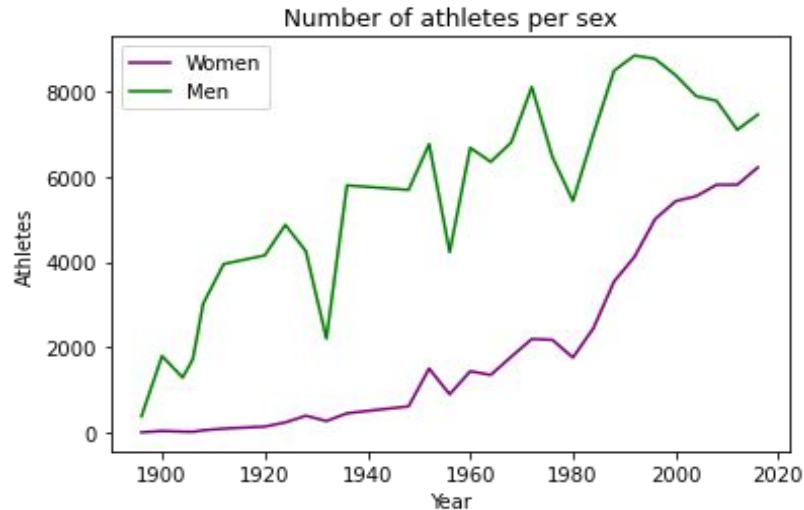
- Different athletes have the first place in total medals and medals in one Game.

	Name	Sport	max_medals
0	Michael Fred Phelps, II	Swimming	28

	Name	Sport	max_medals
0	Aleksandr Nikolayevich Dityatin	Gymnastics	8

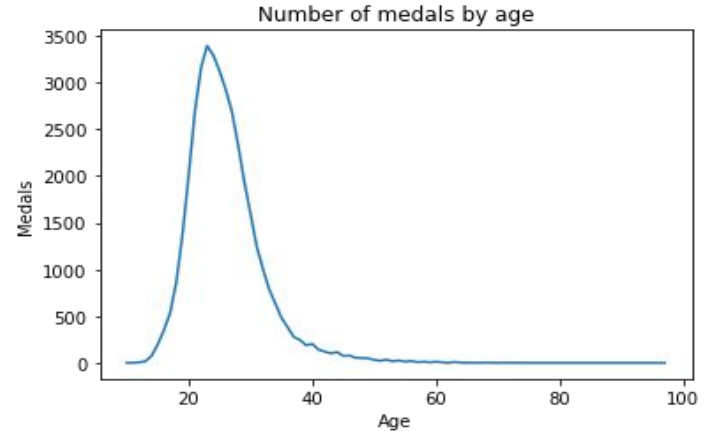
Female/Male participation

Even if the percentage of total female participants in Games is only about 25%, women increase significantly over the years compared to men.



Medals and age

The most medals are in the ages 18-25 and 26-33, probably due to the better physical condition and endurance of the athletes.



Type of medal is not correlated with age of athletes.

	Medal	average_age
0	Bronze	25.868980
1	Gold	25.899629
2	Silver	25.988212

Top countries and medals

Top 3 countries in total medals are among top 3 in Summer and Winter medals

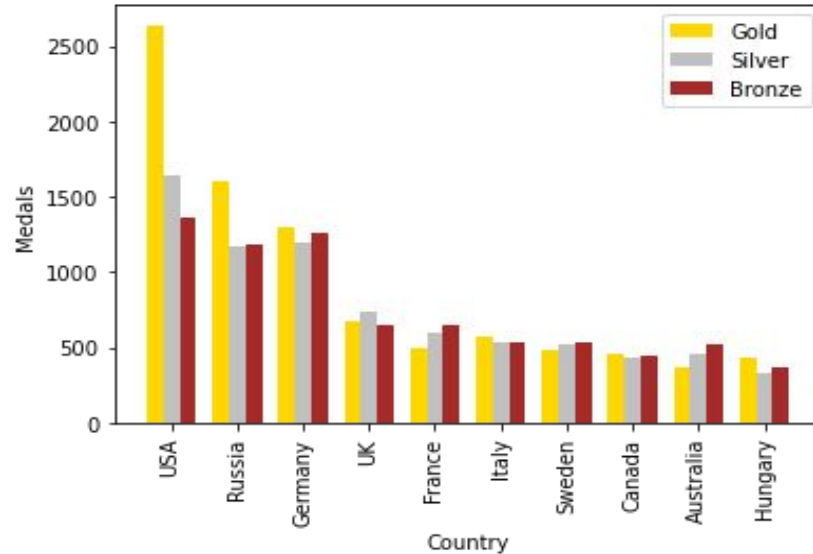
	Country	summer_medals
0	USA	5001
1	Russia	3188
2	Germany	3126
3	UK	1984
4	France	1597
5	Italy	1446
6	Australia	1333
7	Hungary	1123
8	Sweden	1108
9	Netherlands	918

	Country	winter_medals
0	Russia	759
1	USA	635
2	Germany	630
3	Canada	611
4	Norway	443
5	Sweden	428
6	Finland	426
7	Austria	280
8	Switzerland	275
9	Czech Republic	231

Northern countries are on the top 10 of winter medals, while southern countries are on the top 10 of summer.

Type and ranking of medals

For all countries, except the top 2 (USA and Russia), the medals are more divided into the three types of medals, gold, silver and bronze.



Type and ranking of medals

1. The athlete with the most medals takes part in an individual sport.
Michael Fred Phelps is this athlete and he takes part mostly in individual swimming sports.
2. There is a correlation between type of medal and age. Gold medal have a little higher average age because of experience its needed for this.
This is untrue, the average age of each type of medal is almost the same.
3. The lower a country falls in the ranking, the more divided the medals are by type.
Yes, USA and Russia as the first 2 countries have more gold than other type of medals, but as we go down to the ranking of countries we saw that the other types of medals are a little more.

Recommendations

1. International Olympic Committee should encourage and offers athletes all the necessary supplies, especially women, to take part and live the unique experience of Olympic Games.
2. International Olympic Committee should provide more information about the performance of athletes in each event and sport.

THE END!
