

For this project i want to know which countries have better performance, which countries are dominant through the years and which ones are not relevant on the last years, and how were the athletes performance in Football and Basketball through the years

- * 1.-Which countries have more representation, and how was their evolution.
- * 2.-Which countries have the best performance in the games.
- * 3.-Which countries have better performance in Football and Basketball

I think every team might be interest in my findings so they could see where their weaknesses are and how they improved in the last few games and compared themselves with other teams that are better or worse and make a strategy when it comes to compete with them

- * 1.- USA have more medals/performance in Basketball
- * 2.- Brazil have more medals/performance in Football
- * 3.- China have had better performance through the years
- * 4.- People with Age > 35 have received more medals than People with Age < 35

First, I wanted to prove or disprove my hypothesis that the USA had a better performance or more medals in Basketball.

USA: 341 MEDALS. URS: 146 MEDALS. YUG: 84 MEDALS

I see that USA has more medals than other teams but that's not necessary that they had a good performance through the years, so I decided to see how many medals of each category USA and other teams had

USA 35 BRONZE, 24 SILVER, 281 GOLD

URS 48 BRONZE, 50 SILVER, 48 GOLD

ARG 12 BRONZE, 0, SILVER, 12 GOLD

As we can see, USA has better performance than other teams because they have more medals and almost everyone is Gold

Now it was time to prove or disprove my 2nd hypothesis that Brazil had better performance/more medals in Football

BRAZIL: 136 MEDALS. GER: 103 MEDALS. USA: 102 MEDALS

With the this graph we could see that Brazil has more medals but now we need to see how many of those are gold, silver and bronze

USA: 12 BRONZE, 24 SILVER, 66 GOLD

HUN 16 BRONZE, 17 SILVER, 46 GOLD

GBR 1 BRONZE, 8 SILVER, 36 GOLD

...

BRAZIL 34 BRONZE, 85 SILVER, 17 GOLD

Besides Brazil has more silver medals, they're in 9th plaza in gold medals, so we could say that they're not the best team or the one with better performance

Now it's time for my 3rd hypothesis, let's see if China had a better performance through the years

IN the first graphic, China started to win medals after 1980 and after that until 2010 they started to win more than 120 medals per Olympics

Now let's compare China with the other 2 teams that had more medals through the years to see which team had a better performance

In the graphics, USA had a good performance through the years, since the first games they won medals and after 1980 they started winning more than 200 medals and in the other hand we have France that they started winning 200 medals but with the past of the years they only won between 30 and 50 medals per Olympics

After these results we could say China had a good performance after the 1980's but before that, they won few medals. So the Team with best performance is USA

After seeing all the Teams medals in the categories I mentioned, I wanted to see the medal ratio through the years to see if something could be correlated to teams winning more or less medals

Through the years the medal winning ratio decreased

let's take a look at my last hypothesis, that People with age > 35 have more medals than age < 35 first we will see how many athletes from each age we have

Older: 8854. Younger 122148

Younger Athletes: 36245 medals, 12270 gold, 11877 silver, 12098 bronze

Older athletes: 2321 medals, 778 gold, 788 silver, 755 bronze

So as a summary of all my hypotheses, I prove my first hypothesis that the USA has better performance in Basketball than other teams. My other 3 hypotheses were disproved. In the second hypothesis, Brazil had more medals in Football but there are 9 teams that have more gold medals, so we could say that they don't have better performance through the years than other teams. My 3rd hypothesis was also disproved because despite China in recent years having become a competitive team, before 1980 they had a bad performance therefore less medals than other teams. In my last hypothesis, the younger athletes that won a medal are the 29% of the total of younger athletes and in the other hand, the older athletes that won a medal are 26% of the total of older athletes, so my hypothesis were disproved

The first relation I missed initially is how the medals fluctuated at the first olympics compared with the last years, this could be due new rules/regulations in the games.

Other connection I missed is how many athletes of each genre we have so we could make an analysis of every sport if they have a team of each genre and with that see the statistics per genre in every team on every sport

My new metric starts with the hypothesis that in sports like basketball and Football, if the man team is a really winning team, the Female Team is not necessarily that good or viceversa

```
In Basketball, with this code(SELECT NOC AS Team, COUNT(Medal) AS Medals
FROM athlete
WHERE Sport = 'Basketball' and Sex = 'M'
GROUP BY NOC
ORDER BY Medals DESC
LIMIT 20)
```

We have that the top 3 teams are USA with 222 medals, URS 110 and YUG 60 but if we see the Female Team let's see if the top 3 remains the same.

In the Female teams the top 3 is USA 119 medals, AUS 60 Medals, URS 36 Medals. So we could see that only USA has a very competitive Team in basketball in both genres

Now let's see in Football the top 3 teams by each genre

Brasil 101, URS 87, HUN 79 and for Female Team we have USA 79, GER 68 and CAN 36

So we could say that in this case, the best teams of each genre are different so my hypothesis is disproved. I also created two tables so I can see the total number of medals in the winter and summer olympics. Thanks to the Pearson correlation, the coefficient between the total

medals of summer and winter olympics is 0.94 which is positive so we could say that the performance of a country in winter olympics is correlated to that in summer olympics and with the standard deviation we can see that a country performance by year change more in summer games

The next step that need to be taken after all of these analysis would be making strategies for the Teams so they can improve on Sports that they're doing absolutely bad and improve more the ones in they're doing great, because they can compare the performance with the other teams and see which teams would be hard to beat