

# **Analysis of the Olympic Games (1896-2016)**

***Goal:** Making a research and visualization of historical data of the Olympic Games using Python and the libraries – Pandas, Matplotlib and Seaborn*

This report is created by:



**Nikolay Vetsov**

Data Analyst and AI Junior

Freelancer

Hello and welcome to my report, connected to the Olympic games. First of all I have some data I need to make a good analyze. The files are in the archive" folder. The data is so much in one of the excel files, so I am using SQL for better way.

## How many Olympic games were there and in which years?

**(1896-2016)**

According to the data I inspected in the SQL – it says that there are total of **51 Olympic games** between 1896 and 2016. The years with the Olympic games are as following:

1896, 1900, 1904, 1906, 1908, 1912, 1920, 1924, 1928, 1932, 1936, 1948, 1952, 1956, 1960, 1964, 1968, 1972, 1976, 1980, 1984, 1988, 1992, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014 and 2016.

(Total of 35 years)

## Top 10 countries with the most gold, silver and bronze medals

<b>10 STATES WITH MOST MEDALS (1896-2016)</b>		
<b>GOLD MEDALS</b>	<b>SILVER MEDALS</b>	<b>BRONZE MEDALS</b>
<i>1. United States (1724 medals)</i>	<i>1. United States (1159 medals)</i>	<i>1. United States (959 medals)</i>
<i>2. Soviet Union (742 medals)</i>	<i>2. Soviet Union (531 medals)</i>	<i>2. Germany (542 medals)</i>
<i>3. Germany (501 medals)</i>	<i>3. Germany (492 medals)</i>	<i>3. Soviet Union (538 medals)</i>
<i>4. Italy (420 medals)</i>	<i>4. Great Britain (482 medals)</i>	<i>4. France (502 medals)</i>
<i>5. Great Britain (356 medals)</i>	<i>5. France (422 medals)</i>	<i>5. Great Britain (474 medals)</i>
<i>6. Sweden (348 medals)</i>	<i>6. Italy (403 medals)</i>	<i>6. Sweden (417 medals)</i>
<i>7. France (339 medals)</i>	<i>7. Sweden (371 medals)</i>	<i>7. Australia (393 medals)</i>
<i>8. Canada (310 medals)</i>	<i>8. Canada (337 medals)</i>	<i>8. Italy (388 medals)</i>
<i>9. Hungary (304 medals)</i>	<i>9. Australia (322 medals)</i>	<i>9. Canada (346 medals)</i>
<i>10. Russia (266 medals)</i>	<i>10. Russia (278 medals)</i>	<i>10. Finland (328 medals)</i>

It looks like that The United States is leading here with all three types of medals.

Soviet Union – second place in gold and silver medals, but Germany is leading after US with most bronze medals.

Other states with many medals are: Great Britain, France, Italy and Sweden.

Total number of participating men in the Olympics: 174763  
 Total number of participating women in the Olympics: 65838

<b>TOP 10 MEN WITH MEDALS IN THE WORLD (1896-2016)</b>		
<b>GOLD MEDALS</b>	<b>SILVER MEDALS</b>	<b>BRONZE MEDALS</b>
1. <i>Michael Fred Phelps, II</i> (USA) - 13	1. <i>Michael Reusch</i> (Switzerland) - 4	1. <i>Aleksey Yuryevich Nemov</i> (Russia) - 6
2. <i>Kjetil Andr Aamodt</i> (Norway) - 8	2. <i>Yury Yevlampiyevich Titov</i> (Soviet Union) - 4	2. <i>Harri Tapani Kirvesniemi</i> (Finland) - 5
3. <i>Paavo Johannes Aaltonen</i> (Finland) - 6	3. <i>Kjetil Andr Aamodt</i> (Norway) - 4	3. <i>Heikki Ilmari Savolainen</i> (Finland) - 5
4. <i>Sawao Kato</i> (Japan) - 6	4. <i>Nikolay Yefimovich Andrianov</i> (Soviet Union) - 4	4. <i>Maurice Marie Lecoq</i> (France) - 4
5. <i>Aladr Gerevich – Gerei</i> (Hungary) - 5	5. <i>Ole Einar Bjrndalen</i> (Norway) - 4	5. <i>Robert Jeffrey Dover</i> (USA) - 4
6. <i>Agostino Abbagnale</i> (Italy) - 5	6. <i>Albert Helgerud – Thorvaldsen</i> (Norway) - 4	6. <i>Arvo Ossian Aaltonen</i> (Finland) - 3
7. <i>'Raymond Clarence „Ray” Ewry</i> (USA) - 5	7. <i>Anders Sren Holmertz – Johansson</i> (Sweden) - 4	7. <i>Paavo Johannes Aaltonen</i> (Finland) - 3
8. <i>Borys Anfiyanovych Shakhlin</i> (Soviet Union) - 5	8. <i>Marco Albarello</i> (Italy) - 3	8. <i>George Charles Calnan</i> (USA) - 3
9. <i>Paavo Johannes Nurmi</i> (Finland) - 5	9. <i>David Cal Figueroa</i> (Spain) - 3	9. <i>Marie Joseph "Raoul" le Borgne de Boigne</i> (France) - 3
10. <i>Mark Andrew Spitz</i> (USA) - 5	10. <i>Gustaf Eric Carlberg</i> (Sweden) - 3	10. <i>Adrianus Egbert Willem "Arie" de Jong</i> (Netherlands) - 3

There are more men with medals from Finland, USA, Norway and Soviet Union. USA has most gold medals from men, Switzerland most men with silver medals and with bronze medal most men from Russia.

<b>TOP 10 WOMEN WITH MEDALS IN THE WORLD (1896-2016)</b>		
<b>GOLD MEDALS</b>	<b>SILVER MEDALS</b>	<b>BRONZE MEDALS</b>
1. <i>Larysa Semenivna Latynina</i> (Soviet Union) - 5	1. <i>Yang Yang</i> (China) - 5	1. <i>Franziska van Almsick</i> (Germany) - 5
2. <i>Jennifer Elisabeth "Jenny" Thompson</i> (USA) - 5	2. <i>Shirley Frances Babashoff</i> (USA) - 4	2. <i>Antje Buschschulte - Meeuw</i> (Germany) - 4
3. <i>Marit Bjrgen</i> (Norway) - 4	3. <i>Raisa Petrovna Smetanina</i> (Soviet Union) - 4	3. <i>Sofiya Ivanovna Muratova - Poduzdova</i> (Soviet Union) - 4
4. <i>Vra Slavsk - Odloilov</i> (Czechoslovakia) - 4	4. <i>Isabelle Regina Werth</i> (Germany) - 4	4. <i>Merlene Joyce Ottey - Page</i> (Jamaica) - 4
5. <i>Nadia Elena Comneci - Conner</i> (Romania) - 4	5. <i>Marit Bjrgen</i> (Norway) - 3	5. <i>Gabriella Paruzzi</i> (Italy) - 4
6. <i>Allyson Michelle Felix</i> (USA) - 4	6. <i>Veronica Angella Campbell-Brown</i> (Jamaica) - 3	6. <i>Albina Khamitovna Akhatova</i> (Russia) - 3
7. <i>Amy Deloris Van Dyken - Rouen</i> (USA) - 4	7. <i>Vra slavsk – Odloilov</i> (Czechoslovakia) - 3	7. <i>Stefania Belmondo</i> (Italy) - 3
8. <i>Kristin Ann Armstrong - Savola</i> (USA) - 3	8. <i>Adriana Chelariu - Bazon</i> (Romania) - 3	8. <i>Margaret Joyce Cooper - Badcock</i> (Great Britain) - 3
9. <i>Polina Hryhorivna Astakhova</i> (Soviet Union) - 3	9. <i>Choi Eun-Gyeong</i> (South Korea) - 3	9. <i>Clara Hughes</i> (Canada) - 3
10. <i>Bonnie Kathleen Blair - Cruikshank</i> (USA) - 3	10. <i>Natalie Anne Coughlin - Hall</i> (USA) - 3	10. <i>Kerstin Kielga</i> (Germany) - 3

USA has many women in TOP 10 of the medals. There are also from Germany and Soviet Union. Soviet Union is leading in the gold medals, China is leading in the silver medals and Germany is leading in the Bronze Medals.

## Most common sports and events (1896 – 2016)

Sports	Times
Athletics	34426
Gymnastics	24942
Swimming	20745
Shooting	10240
Cycling	9741

Events	Times
Men's Water Polo	2839
Men's Basketball	2862
Men's Hockey	3329
Men's Ice Hockey	4027
Men's Football	5062

It looks like that between 1896 and 2016, during most of the Olympic games, there has been mostly **Athletic sports** (34426), followed by **Gymnastics** (24942).



They say that the Athletics is a prominent sport in the Olympics due to its historical significance, broad appeal, and diverse range of events. One of the oldest and most recognizable Olympic sports, tracing its roots back to the ancient Greek Olympics. The variety of events like

track and field, road running, and race walking ensures broad participation and spectator interest.

Gymnastics is also a famous sport that presents in the Olympics and have a stunning display of strength, flexibility, and precision, appealing to a broad audience. Physical fitness was highly esteemed and gymnastics events were part of the ancient Olympic Games as well.

---

Looks like the most popular Olympic events are related to the men. Women were not allowed to participate in the beginning of the Olympics, because „**they were not seen as equals**“. According to the information – participating by women naked in front of men was not acceptable for women and that is why they were not allowed in the Olympics.

***The most present in the Olympic games event is  
“Men’s Water Polo”***





Men's water polo is famous in the Olympics because it's one of the oldest team sports (since 1900), extremely physical and exciting, and features intense rivalries, especially among European countries like Hungary, Serbia, and Italy.

## ***Men's Basketball***



Men's basketball another famous sport that presents in the Olympics. It's the second most popular sport in the United States. A fast-paced, exciting gameplay, relatively simple rules, and widespread accessibility is which makes is so popular.

Invented in 1891 by Canadian-American gym teacher James Naismith in Springfield, Massachusetts, in the United States, basketball has evolved to become one of the world's most popular and widely viewed sports.

The global appeal is further boosted by the ability to foster teamwork and social skills, along with its adaptability to a different conditions.

Also, the presence of star players and the marketing of men's basketball makes the sport more aggressive and competitive, which contributes to its popularity.

### **The most host country in most Olympic games (1896-2016)**

<b>City</b>	<b>Times hosted</b>
London	3
Athens	3
Paris	3
Los Angeles	2
Innsbruck	2
Lake Placid	2
Sankt Moritz	2
Stockholm	2
Antwerpen	1
Atlanta	1

According to the table, looks like that there are 3 cities with three times as host – London, Athens and Paris. They have a rich history, symbolism, political stability and international influence and are capable of organizing large-scale events with global matter.

## **How the common participating has changed with time?**

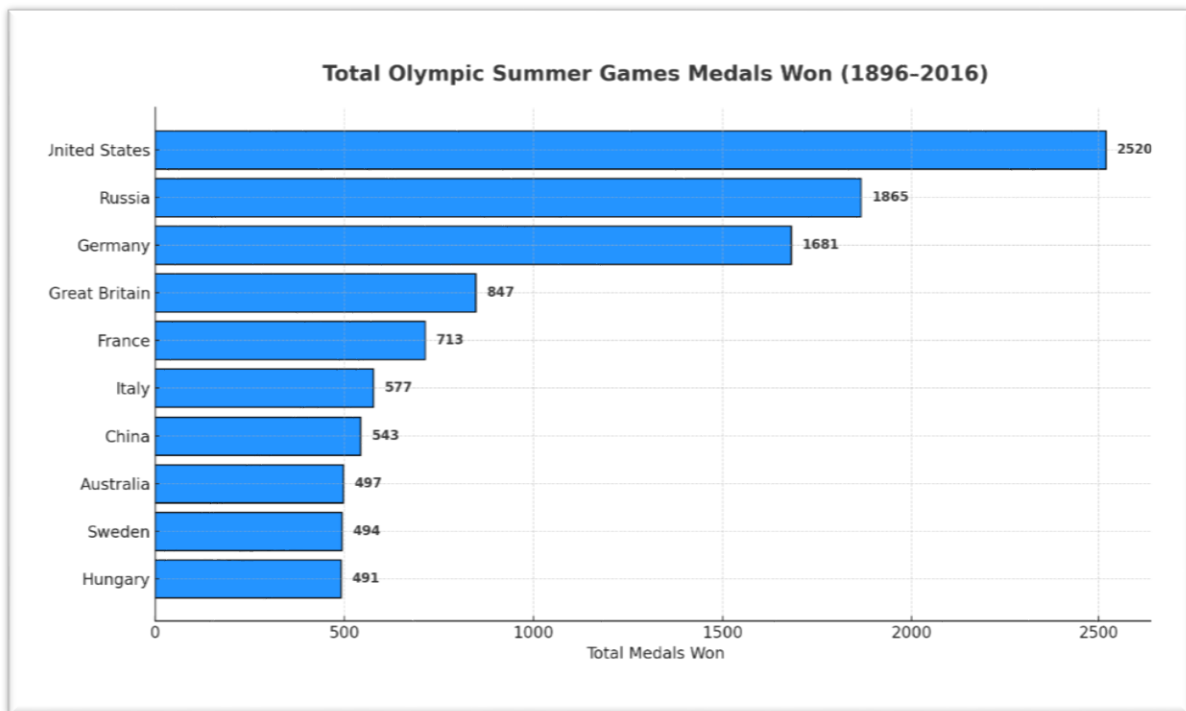
The Olympics are created in Athens, Greece in 1896. By that time, there were only 14 countries allowed to participate and most of them were from Europe. There has not been much species of sport and only men were allowed to perform, but in the future they let woman to join also. First not many of them, but later their number has increased.

After 1990, the Olympics became more inclusive and global. More sports have been added – Beach Volleyball and Mountain Biking (in 1996), Triathlon and Taekwondo (in 2000), BMX (in 2008). Also, some more recently added are Women's boxing (in 2012), Golf and Rugby sevens (in 2016). The 2020 Tokyo Olympics saw the debut of Skateboarding, Surfing, Sport climbing, and Karate (though Karate was later removed). Breaking, also known as Breakdancing, made its debut at the 2024 Paris Olympics. More countries are also joining after 1990 – from Asia, Africa and Latin America.

As you can see, the Olympics are growing more and more in the future.

There are also periods of boycotts, such as in 1980 and 1984, which temporarily reduce the number of participants.

## TOP 10 MEDALS WON BY COUNTRIES



The chart shows the number of medals won by the leading countries in the history of the Summer Olympics from 1896 to 2016. It clearly shows the dominance of the United States with a total of 2,520 medals - significantly more than any other country. In second place is Russia with 1,865 medals, followed by Germany with 1,681 medals.

Great Britain and France also show a steady presence, with 847 and 713 medals respectively. Italy, China and Australia are among the average participants, showing strong sporting traditions. At the bottom of the ranking are Sweden and Hungary, which, although with fewer medals (494 and 491), have made significant contributions to Olympic history.

## CONCLUSION



The Olympic Games have changed significantly over the years, from humble beginning with a limited number of participants and sports to a global event that unites the whole world. In ancient times and in the early modern editions, only men were allowed to participate and the number of disciplines was minimal. Over time, equality was introduced and more and more women started to compete. Sports became more diverse - from classical athletics and wrestling to tennis, basketball and even skateboarding.

The number of participating countries is constantly growing over time, transforming the Olympic games into the largest sporting event in the world. They show not only the pursuit of excellence, but also the desire for cooperation, tolerance and cultural enrichment between the nations.