

# Exploring 120years of Olympic history

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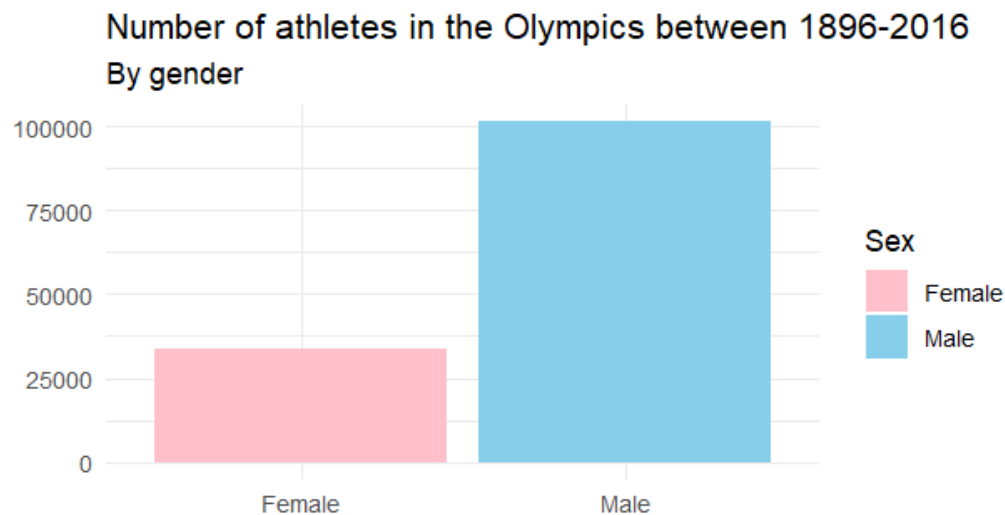
## Introduction

Analyzing Olympic Games data from 1896 to 2016, this study primarily focuses on the distribution of medalists using data wrangling with dplyr and visualizations with ggplot2, both of which are included in the core data science package tidyverse. I will explore which nationalities are the most successful, examine the gender distribution of athletes, and analyze which sports have the highest and lowest average ages. Additionally, the average age of medalists over time was plotted to identify patterns in the age of medal winners.

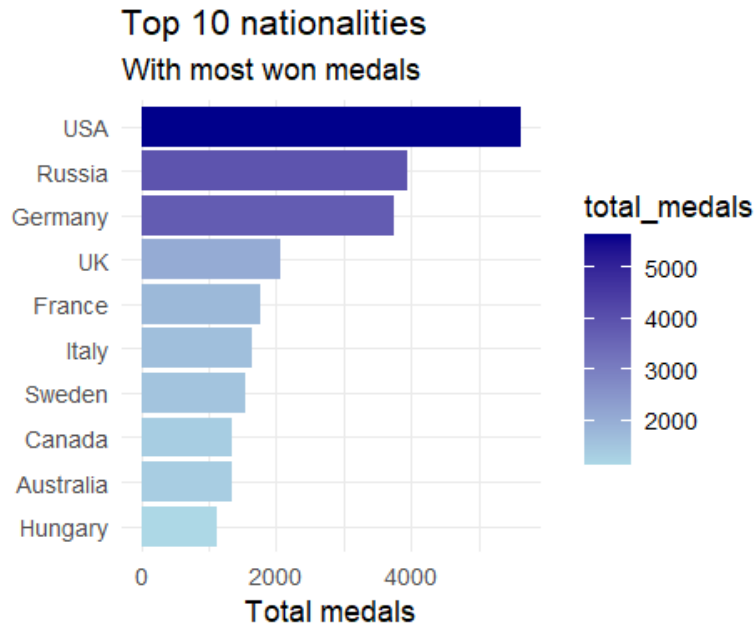
Main R-syntax for this analysis can be found in separate file: <https://github.com/HNordholm/Exploring-Olympic-games-with-tidyverse/blob/main/OlympicsRsyntax.R>

## Solution summary

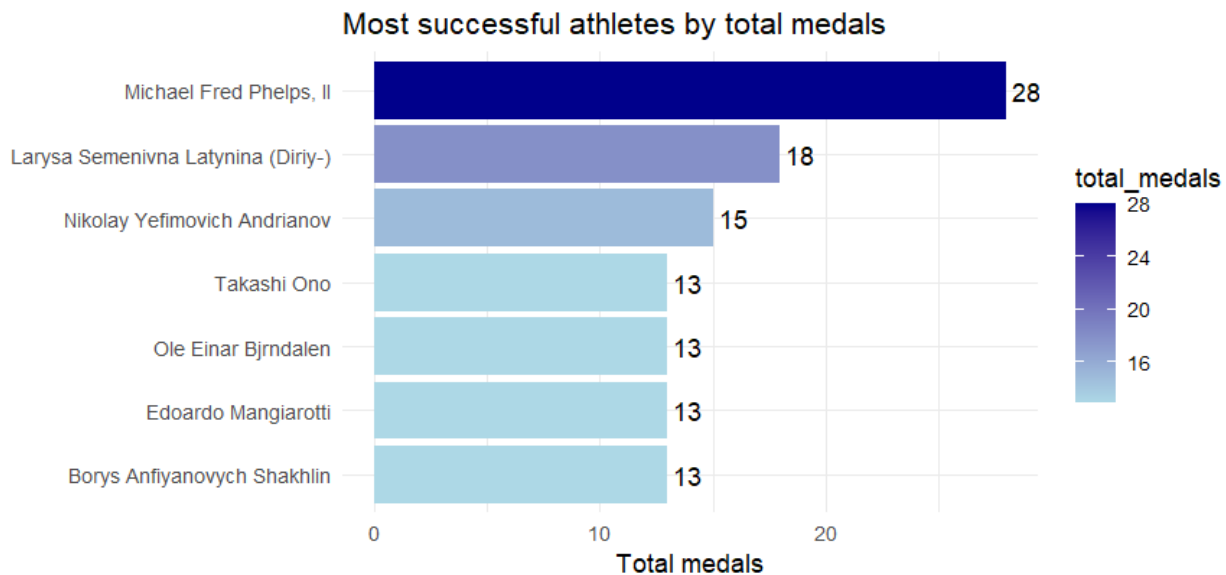
From the analysis, it was established that a total of 101,590 men and 33,981 women have competed in the Olympic games over this time series, indicating that men are the dominant gender in Olympic sports.



The results of the analysis also show that the USA is dominant in terms of medals won, followed by Russia and Germany. We also find only one nordic nation on the top 10 list for the highest number of medals: Sweden. Despite its relatively small population, Sweden continues to produce a high number of professional athletes at an elite level.



At the top of the list of athletes with the most Olympic medals, Michael Phelps stands out with 28 medals (as of 2016), making him one of the greatest swimmers in history. Following him is the legendary Russian gymnast Larysa Latynina, who has won 18 medals throughout her career.



Age was also analyzed, concluding that the sport of Roca had the highest average age among participants, with a mean age of 53 years, compared to rhythmic gymnastics, where the average age was 19 years. From the graph below, it is evident that the average age of medalists has gradually decreased over time, with a notable dip reaching its lowest point in the 1980s. The decline in average age could indicate a shift towards younger athletes achieving peak performance in the highly competitive world of Olympic sports.

Average age of medalists over time  
Olympic games 1896-2016

