Olympic data

Olympic Data Project

The aim of our project is to perform an in-depth analysis of the Olympics dataset to gain valuable insights into the history and trends of the Olympic Games. We are particularly interested in exploring the relationship between an athlete's attributes and their performance in the Olympics.

Dataset details

We will be using the Olympics dataset obtained from Kaggle, which includes information such as athlete details (ID, Name, Sex, Age, Height, Weight), team information (Team, NOC), Games details (Year, Season, City), sports information (Sport, Event), and medal achievements (Medal type).

Our presentation will have 3 main focuses

- Analysis of the average age of olympic athletes over the years.

- A look into athlete's height and weight and how it affects their chance of winning a medal. And how those attributes have changed in basketball and gymnastics.

- Top ten participating countries, age of participating athletes, and comparing male vs female participation.

Question:

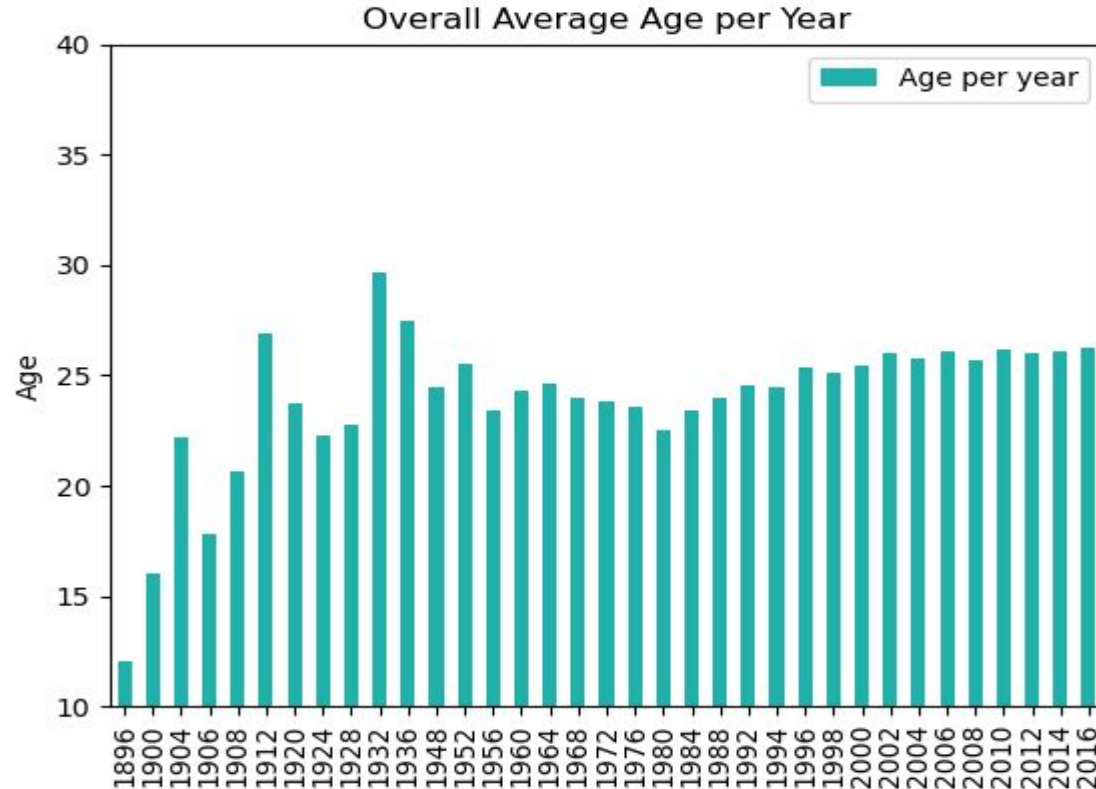How has the average age of olympic athletes changed over the years?

Average overall age of male and female participants

Average overall age of male and female
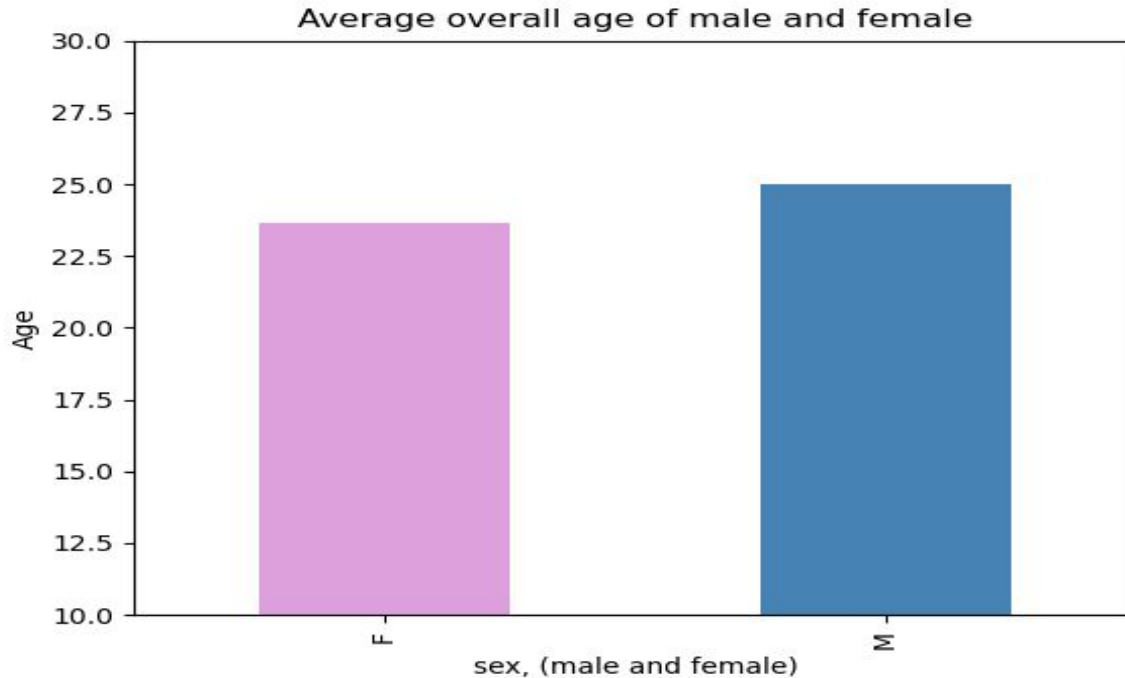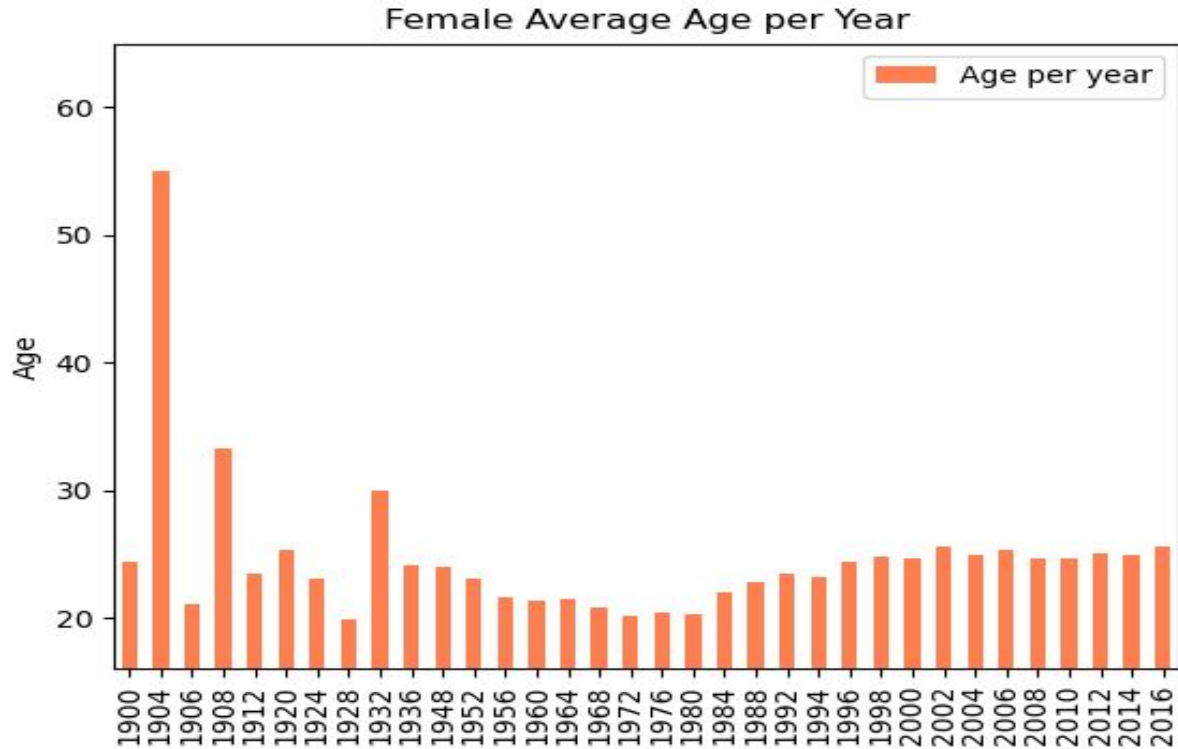
Male: 24

Female: 23

Overall Average age through the years

Overall Average Age per Year

Overall oldest average age: 29 (1932)

Overall youngest average age: 12 (1896)

Average age of female participants over the years

Female Average Age per Year

Oldest average female age: 55 (1904)

Youngest average female age :19 (1928)

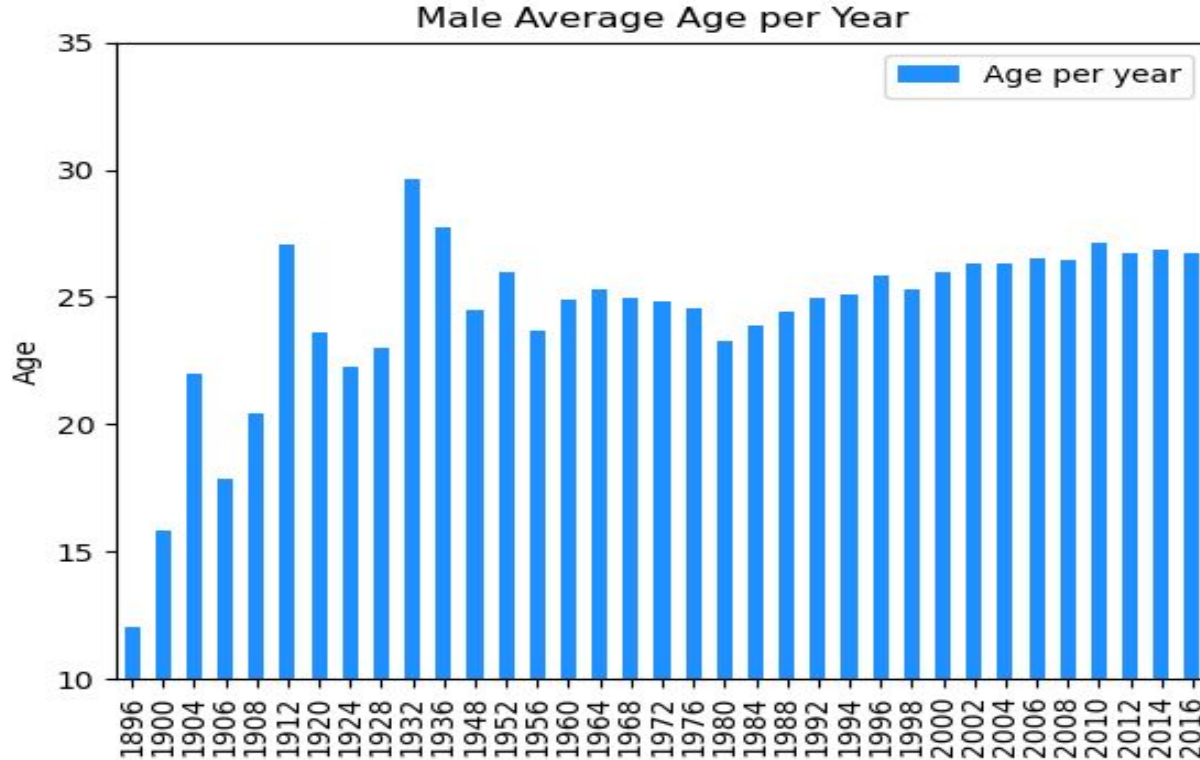# Interesting facts of female participants

The oldest female participant in the data set is Anne Marie Carl-Nielsen. She participated in the 1936 summer games in the Art competitions sport ; more specifically she did mixed sculpting at the age of 73.

One of the youngest female participants is Kim Yun-Mi from Seoul Korea she participated in the 1994 winter olympics in the speed skating sport at the age of 13 winning gold

# Average age of male participants over the years

Oldest average male age: 29 (1932)

Youngest average male age: 12 (1896)

Interesting facts of male participants

The oldest male participating age was 88 years old, one these participants was Thomas Eakins on the USA team, he participated in the 1932 summer olympics in the sport of Art competitions, more specifically, painting.
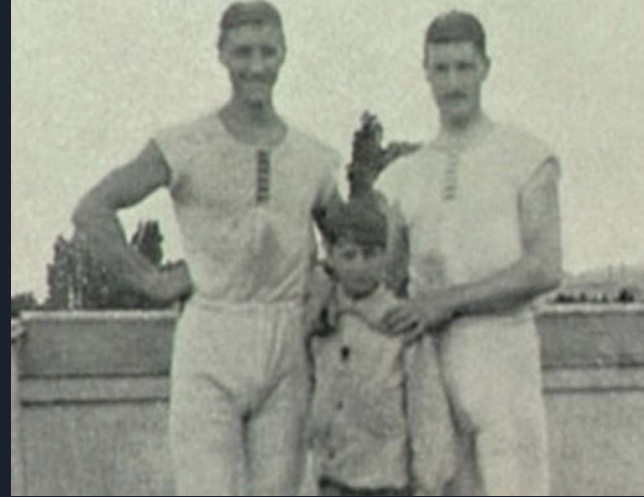
The youngest male olympic participant was also the youngest ever olympic participant. His name is Dimitros Loundras, he was just 10 years old and participated in the 1896 Athens games in the gymnastic sport, he is also the youngest olympic participant to win a medal.

How has the average age of olympic athletes changed over the years?

As we saw, the average age has definitely changed over the years, for example, in the male graph we saw that in the beginning of the olympics the average age is much younger than it is today at just 12 years old, and in the female graph we saw that the average age was closer to what it is today, but then we saw a massive spike in the average age in 1904 with the average being 55. But with all graphs we saw that the age seems to almost plateau around the 1990's.
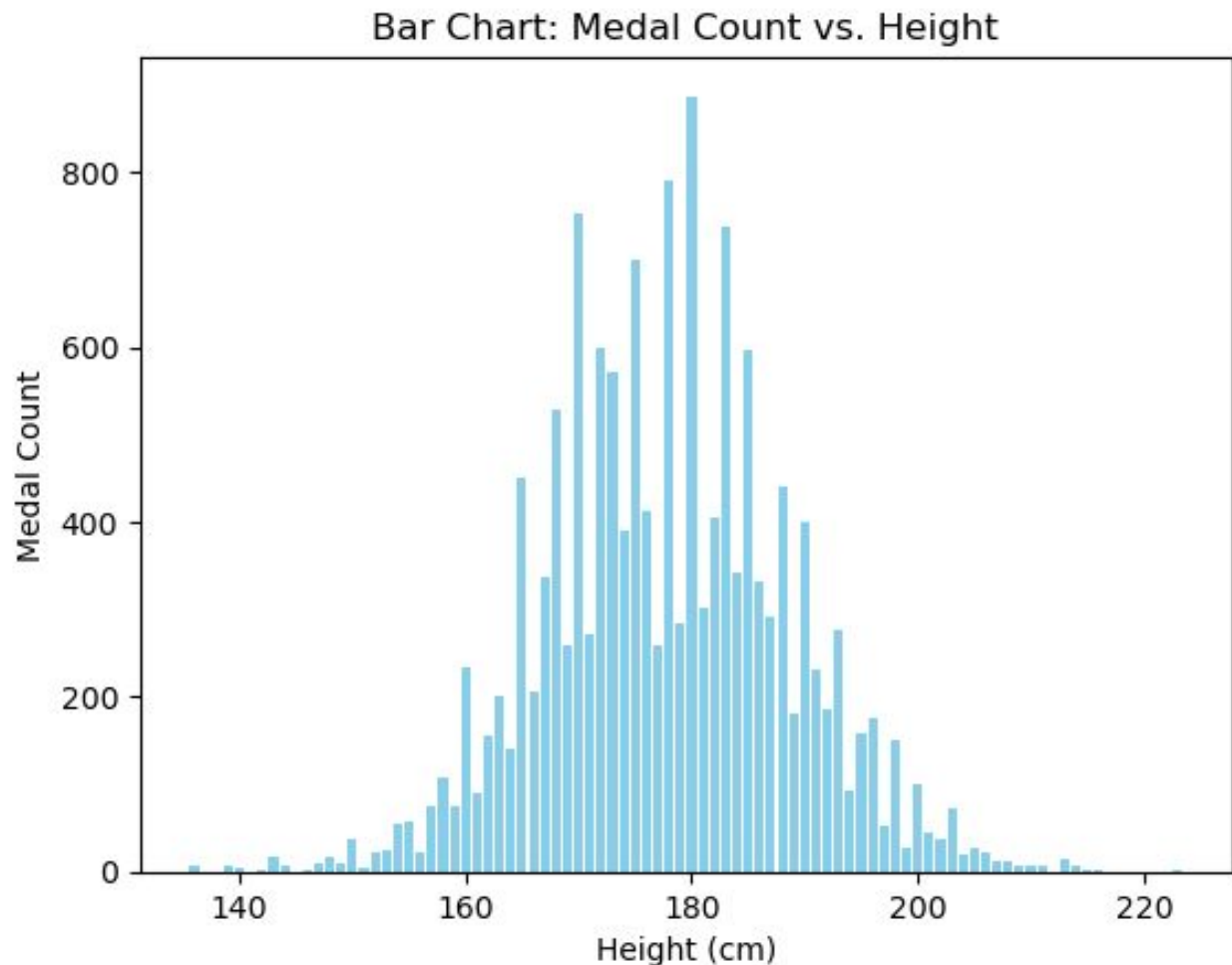
Question:

Does an athlete's height or weight predict their likelihood of winning a medal?
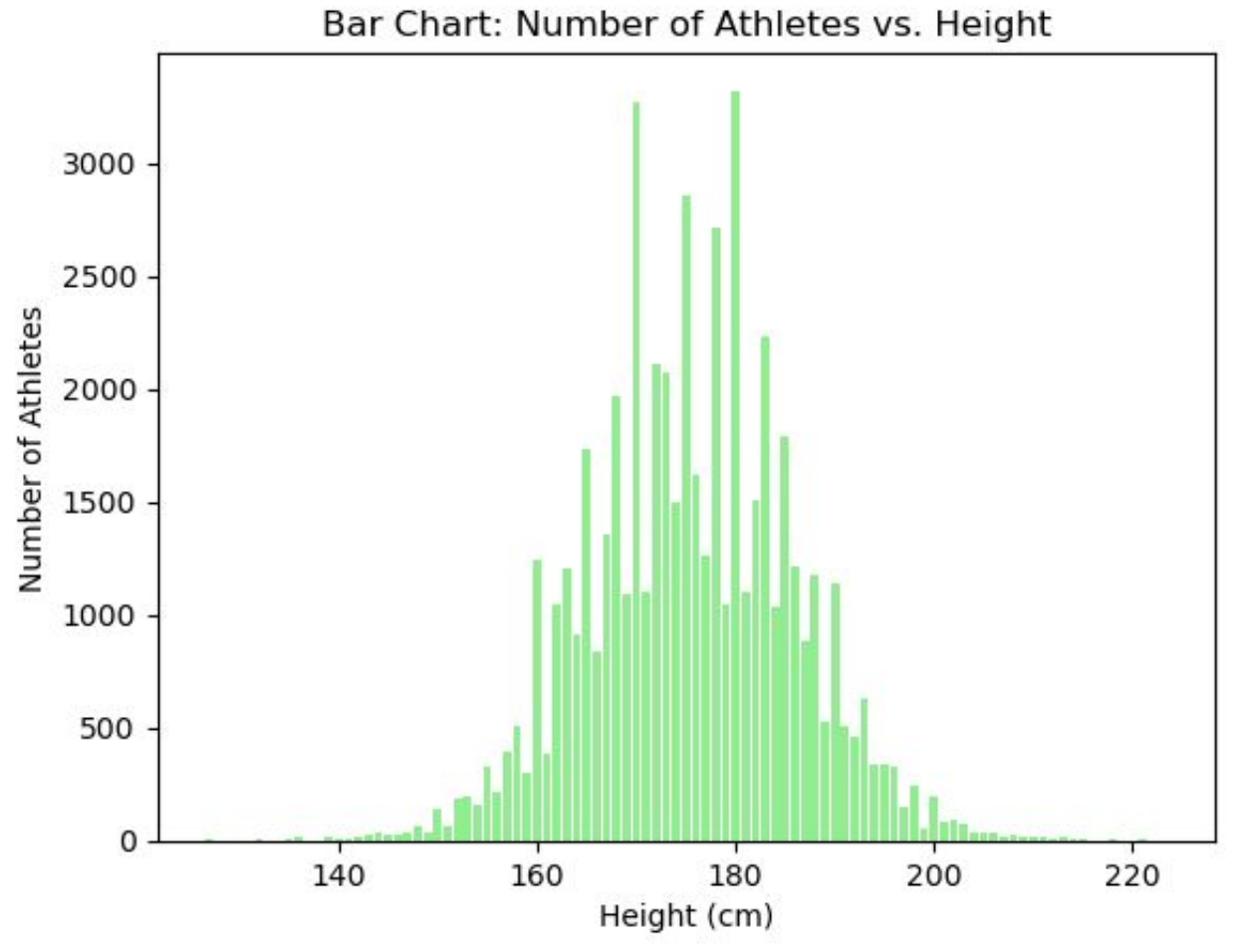
This chart shows that distribution is fairly normal.

How does it compare to athlete distribution?
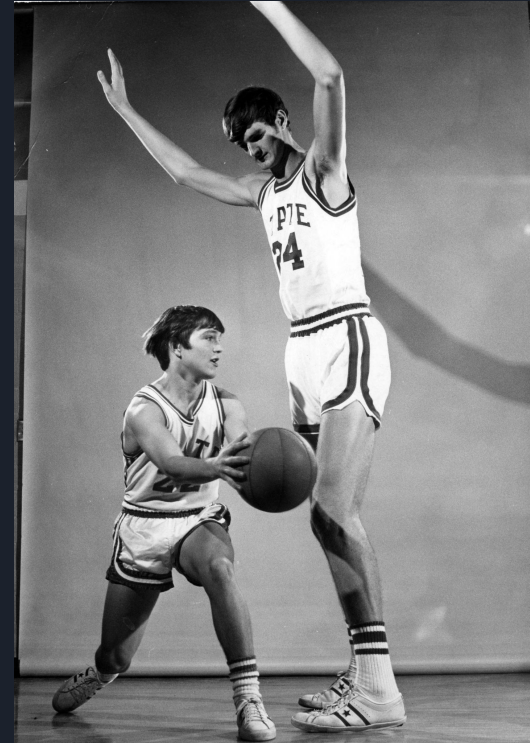
Bar Chart: Medal Count vs. Height

Very similar distribution.

Height does not determine medal success. Athletes of a variety of heights have been able to medal.

Tallest

The tallest athlete is Tommy Loren Burleson, who is 223.0 cm (almost 7 ft 4 in) tall and participated in the event: Men's Basketball in 1972.
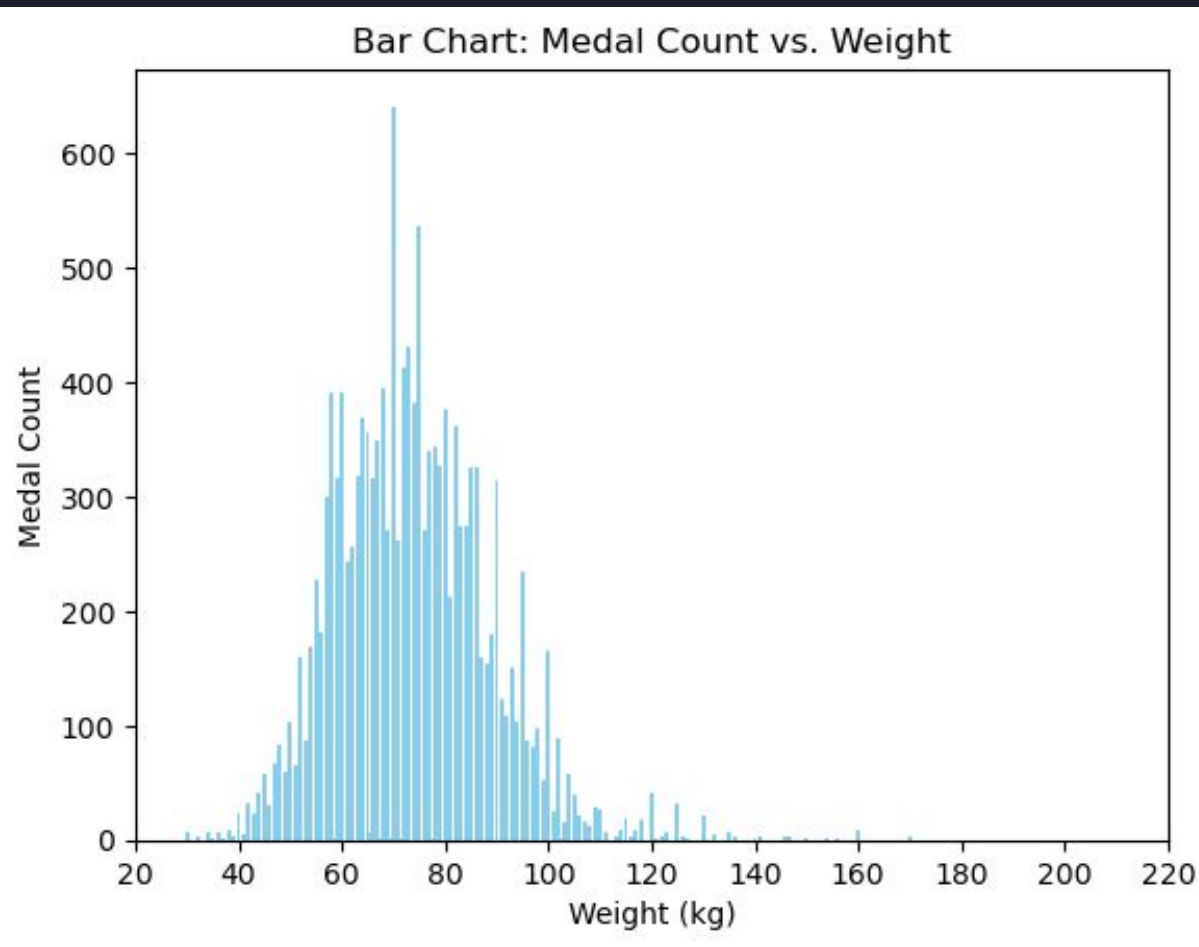
Shortest

The shortest athlete is Rosario Briones, who is 127.0 cm (4 ft 2 in) tall and participated in the event: Gymnastics Women's Individual All-Around in 1968.

Again, a fairly normal distribution.

Bar Chart: Medal Count vs. Weight

The number of athletes matches the distribution of medals, which tells us that a particular height is not a sole determinant of medal success..
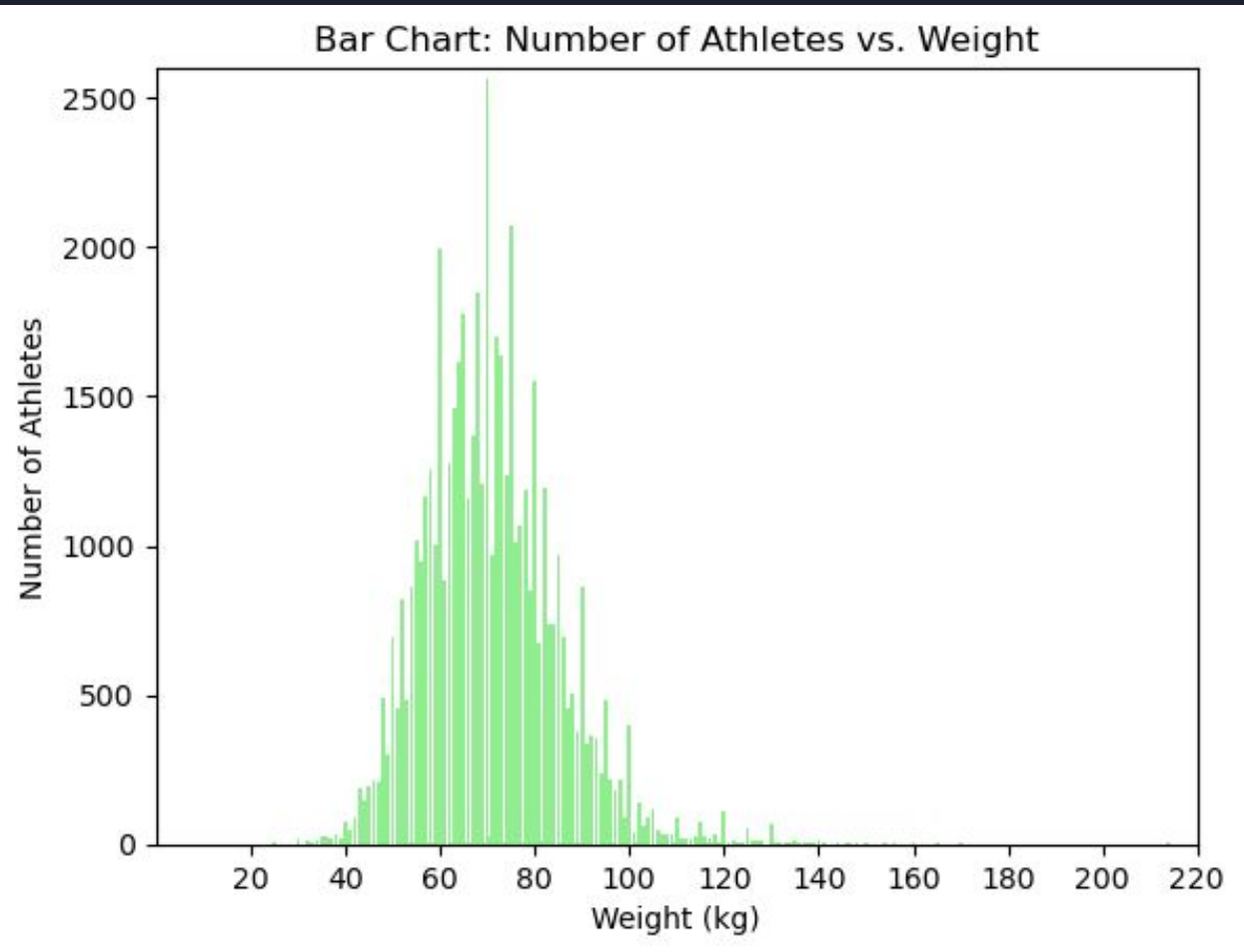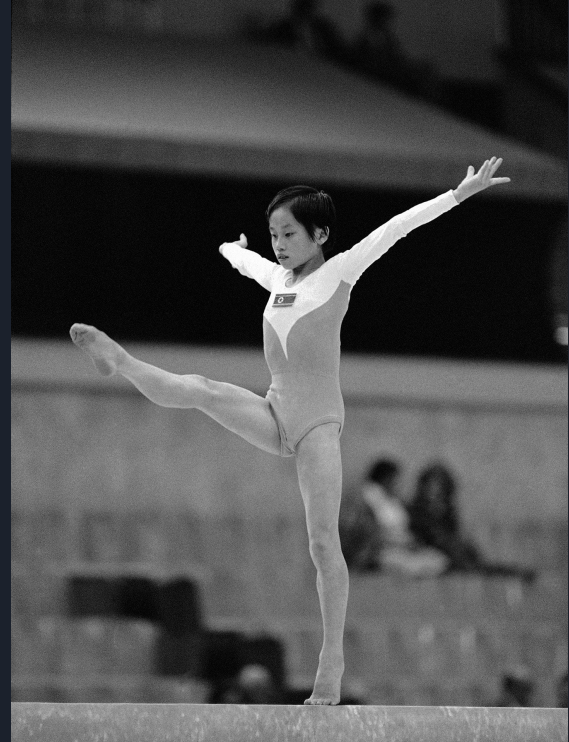
Heaviest

The heaviest athlete is Ricardo Blas, Jr., who weighs 214.0 kg (472 lbs) and participated in the event: Judo Men's Heavyweight in 2008.

Lightest

The lightest athlete is Choi Myong-Hui, who weighs 25.0 kg (55lbs) and participated in the event: Gymnastics Women's Individual All-Around in 1980.
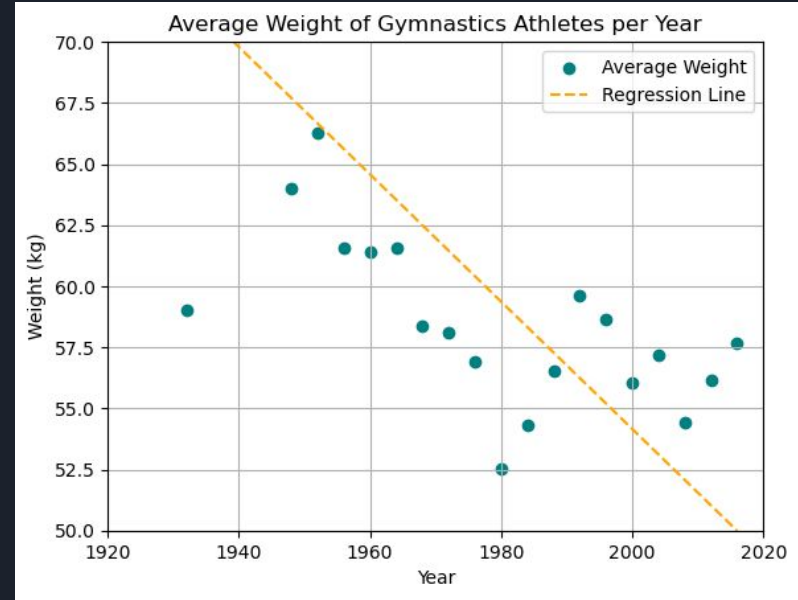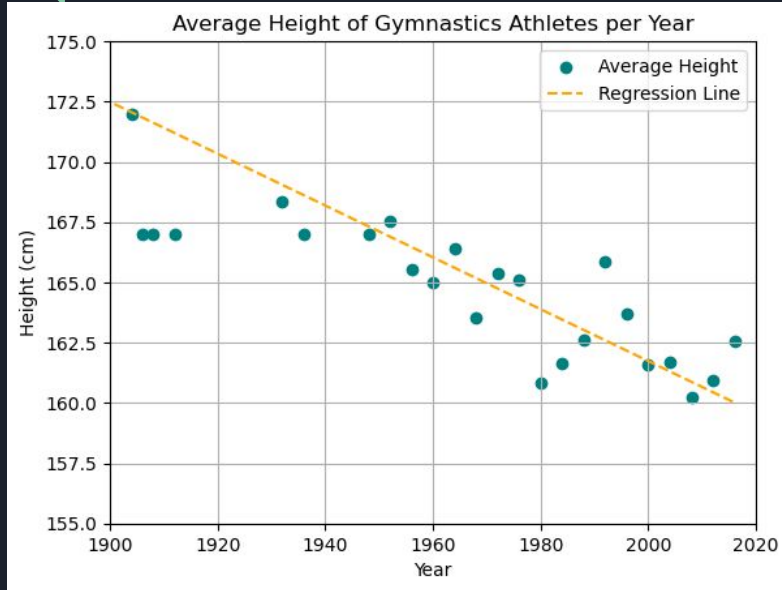
How has height of basketball athletes at the olympics changed over the years?

The linear regression line shows us an increasing trend in the height olympic basketball athletes over time, with most of that change happening between the 1940s and 1970s.
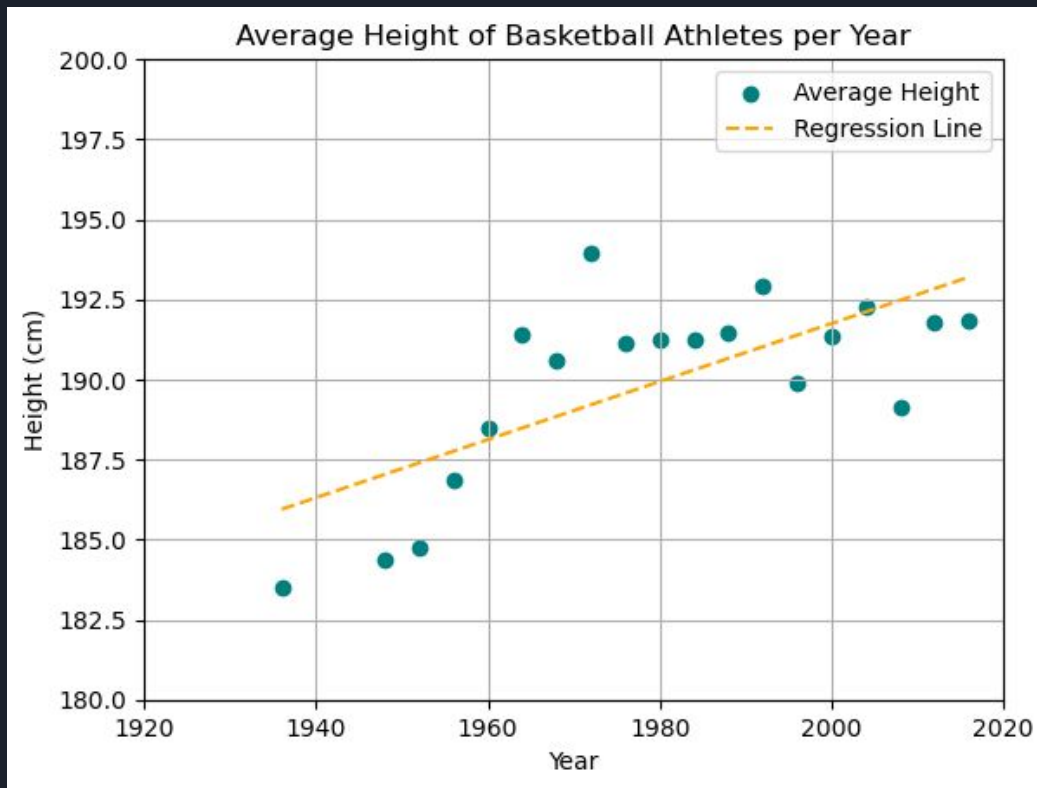
How has height and weight of olympic gymnasts at the olympics changed over the years?

Both height and weight show a decreasing trend,, but why?

Some possible reasons

- Gymnastics is evolving and coaches might choose athletes based on physical attributes that may be seen as required for success. For example, shorter and lighter athletes might be able to do more flips.

- Stereotyping certain physical attributes might lead a shorter or lighter person to be drawn to gymnastics since those attributes are common in the sport.

- In order to draw definitive conclusions, it would require further investigation and analysis.
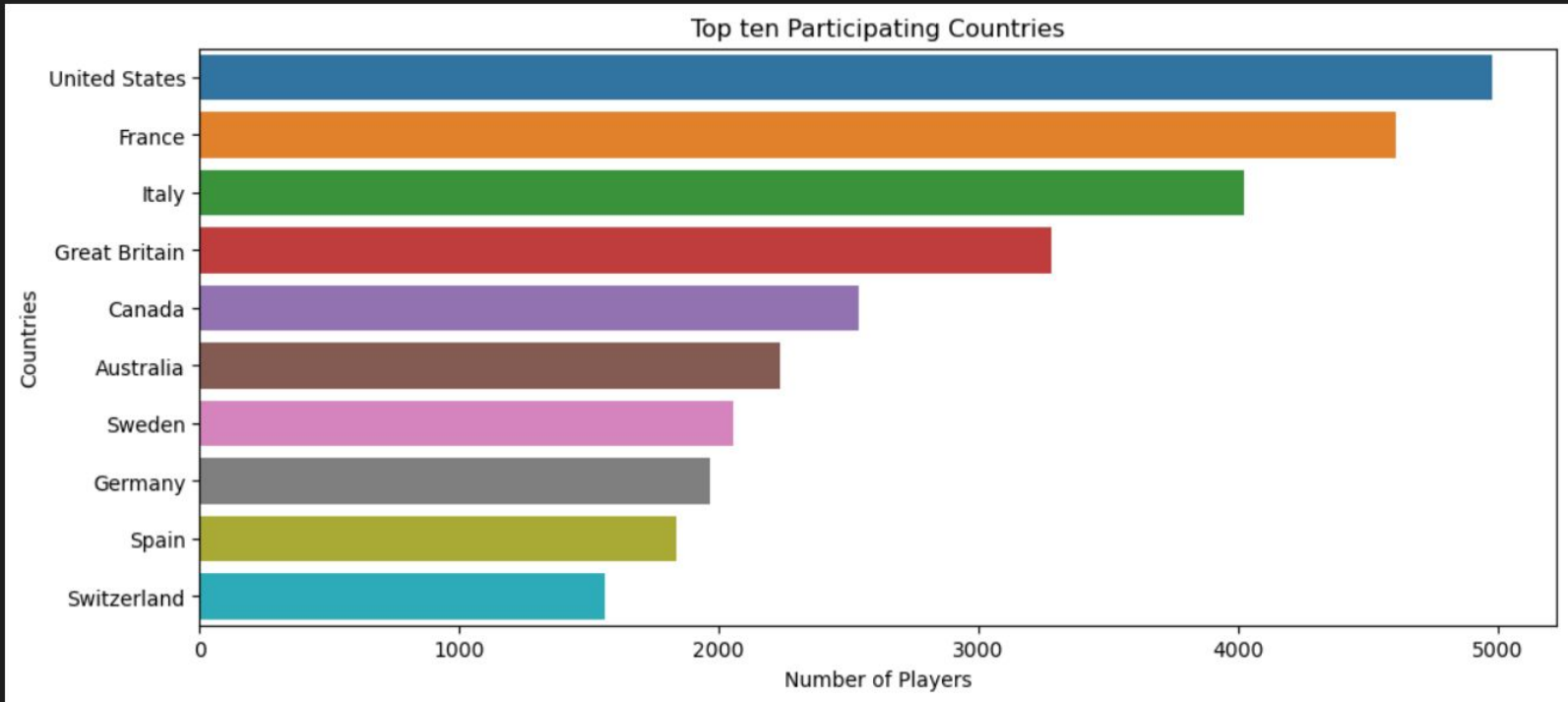
Top Ten Participating Countries In Olympic History From 1896- 2016

Country	Number of Athletes
UNITED STATES	4979
FRANCE	4608
ITALY	4023
GREAT BRITAIN	3282
CANADA	2536
AUSTRALIA	2235
SWEDEN	2057
GERMANY	1965
SPAIN	1836
SWITZERLAND	1560

Graphical Representation of Top Ten Participating Countries in Olympic History from 1896 - 2016
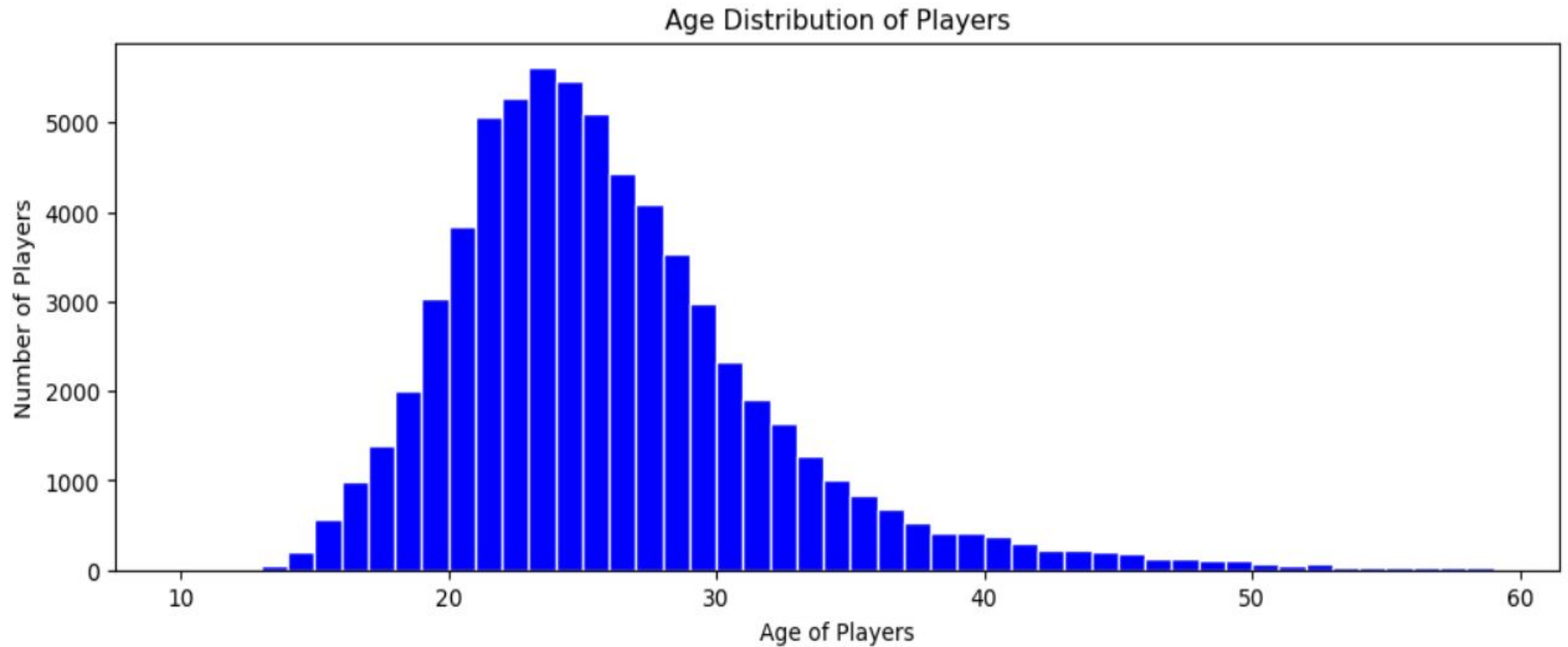

Top ten Participating Countries

Facts About Top Ten Countries

❖ The United States has been the most dominant participating team in modern olympic games since 1896.

❖ 7 out of the top 10 participating countries are from Europe.

❖ The 3 outside European countries are the United States,Australia and Canada.

❖

Age Distribution Of Athletes

Age Distribution of Players

Comments On Age Distribution Of Athletes

❖ Age of athletes is normally distributed.

❖ Majority of athletes are between the age of 20-30.

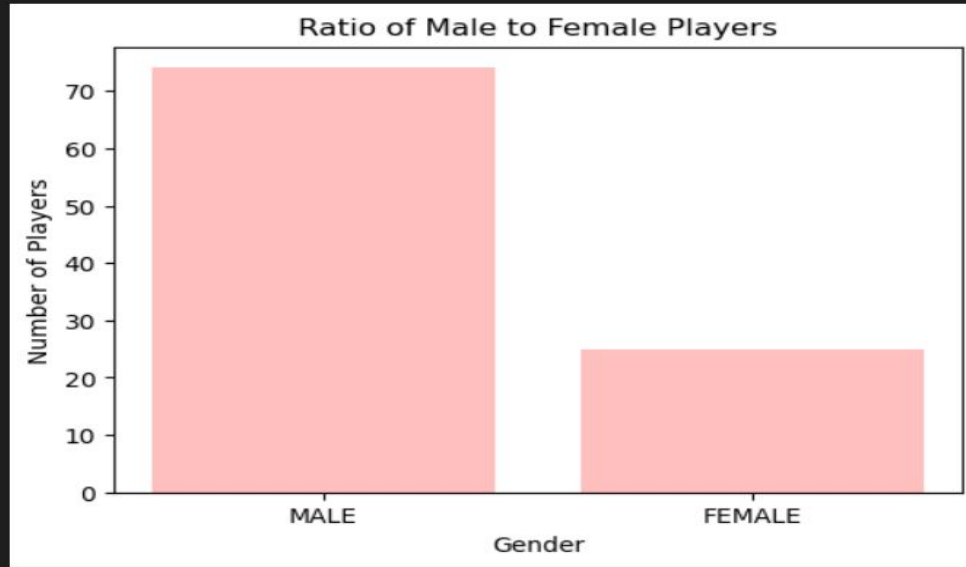❖ Very few athletes between age 50-60 have participated in olympic games.

Ratio of Male to Female Players

Male	Female
51,800	18,200

❖ Male to Female ratio in Olympic history is 74:25
❖ We can conclude that the olympic games is a male dominated sports.

Graphical Representation of Male to Female ratio in Olympic History

Pie Chart Distribution of Male to Female Participating Ratio in Olympic History