Peruvian Athletes at the Olympics: A Performance Overview (1936-2022)

Project Description

This project focuses on analyzing the performance of Peruvian athletes in the Summer and Winter Olympic Games from 1896 to 2022. The analysis is conducted using Python for data manipulation, visualization, and statistical insights, complemented by Power BI for interactive dashboards. The goal is to explore various aspects of the athletes' participation, such as rankings, event performance, and historical trends, to provide a comprehensive overview of Peru's Olympic history.

Limitations

The dataset does not include the results recently obtained in Paris 2024. Therefore, the bronze medal obtained in these last Olympic Games and other remarkable results are not included. In addition, there were some missing data regarding athlete names (e.g. volleyball teams) and some times achieved (e.g. Kimberly Garcia in Rio 2016). For this reason, it was not possible to analyse the number of athletes who attended each venue, but rather the participation in disciplines and events, whether individual or team.

Data source

https://www.kaggle.com/datasets/piterfm/olympic-games-medals-19862018/data?select=olympic_results.csv

Libraries

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

Import csv

```
olympic results = pd.read csv('./olympic results.csv', header=0)
olympic results.head()
  discipline title
                      event title
                                      slug game participant type
medal type
           Curling Mixed Doubles beijing-2022
                                                         GameTeam
GOLD
           Curling
                    Mixed Doubles
                                   beijing-2022
                                                         GameTeam
SILVER
           Curling Mixed Doubles
                                   beijing-2022
                                                         GameTeam
BRONZE
```

```
3
           Curling Mixed Doubles beijing-2022
                                                          GameTeam
NaN
4
           Curling Mixed Doubles
                                    beijing-2022
                                                          GameTeam
NaN
                                              athletes rank equal
rank position \
   [('Stefania CONSTANTINI', 'https://olympics.co...
                                                             False
1
   [('Kristin SKASLIEN', 'https://olympics.com/en...
                                                             False
2
2
   [('Almida DE VAL', 'https://olympics.com/en/at...
                                                            False
3
   [('Jennifer DODDS', 'https://olympics.com/en/a...
                                                             False
4
   [('Rachel HOMAN', 'https://olympics.com/en/ath...
                                                             False
5
    country_name country_code country_3_letter_code athlete_url \
0
           Italy
                                                  ITA
                                                               NaN
                            IT
1
          Norway
                            NO
                                                  NOR
                                                               NaN
2
                            SE
                                                  SWE
          Sweden
                                                               NaN
3
   Great Britain
                            GB
                                                  GBR
                                                               NaN
                            CA
          Canada
                                                  CAN
                                                               NaN
  athlete full name value unit value type
0
                NaN
                            NaN
                                        NaN
1
                NaN
                            NaN
                                        NaN
2
                NaN
                            NaN
                                        NaN
3
                            NaN
                NaN
                                       NaN
4
                NaN
                            NaN
                                       NaN
```

Filter by country (Peru)

```
# Load and filter the Olympic results dataset for Peruvian athletes
olympic results peru =
olympic results[olympic results['country name']=='Peru']
olympic results peru.head()
     discipline title
                                     event_title
                                                      slug game \
2328
        Alpine Skiing
                            Women's Giant Slalom
                                                   beijing-2022
2414
        Alpine Skiing
                                  Women's Slalom
                                                   beijing-2022
             Shooting
3891
                       25m Rapid Fire Pistol Men
                                                     tokyo-2020
4027
             Shooting
                                         Trap Men
                                                     tokyo-2020
                              10m Air Pistol Men
4232
             Shooting
                                                     tokyo-2020
     participant_type medal_type athletes rank_equal rank_position \
2328
              Athlete
                             NaN
                                       NaN
                                                False
                                                                 46
              Athlete
                             NaN
                                       NaN
                                                False
                                                                 44
2414
              Athlete
                                                False
                                                                 18
3891
                             NaN
                                       NaN
```

```
4027
              Athlete
                                                  False
                                                                    27
                              NaN
                                        NaN
4232
                                                                    29
              Athlete
                              NaN
                                        NaN
                                                  False
     country name country code country 3 letter code
2328
             Peru
                             PE
                                                    PER
2414
             Peru
                             PE
                                                    PER
3891
                             PE
                                                    PER
             Peru
                             PE
4027
             Peru
                                                    PER
                             PE
4232
                                                    PER
             Peru
                                              athlete url \
2328
      https://olympics.com/en/athletes/ornella-oettl...
2414
      https://olympics.com/en/athletes/ornella-oettl...
3891
        https://olympics.com/en/athletes/marko-carrillo
      https://olympics.com/en/athletes/alessandro-de...
4027
4232
        https://olympics.com/en/athletes/marko-carrillo
                  athlete full name value unit value type
2328
                Ornella OETTL REYES
                                        2:24.05
                                                       TIME
                                        2:04.59
2414
                Ornella OETTL REYES
                                                       TIME
3891
                     Marko CARRILLO
                                            NaN
                                                        NaN
4027
      Alessandro DE SOUZA FERREIRA
                                            NaN
                                                        NaN
4232
                     Marko CARRILLO
                                            NaN
                                                        NaN
olympic results peru.info()
<class 'pandas.core.frame.DataFrame'>
Index: 338 entries, 2328 to 145486
Data columns (total 15 columns):
#
     Column
                             Non-Null Count
                                              Dtype
- - -
 0
     discipline title
                             338 non-null
                                              object
 1
     event title
                             338 non-null
                                              object
 2
     slug_game
                             338 non-null
                                              object
 3
     participant type
                             338 non-null
                                              object
 4
     medal type
                             4 non-null
                                              object
 5
     athletes
                             4 non-null
                                              object
 6
     rank equal
                             85 non-null
                                              object
 7
     rank position
                             318 non-null
                                              object
     country_name
 8
                             338 non-null
                                              object
 9
     country code
                             338 non-null
                                              object
 10
     country 3 letter code
                             338 non-null
                                              object
     athlete url
 11
                             285 non-null
                                              object
     athlete full name
 12
                             317 non-null
                                              object
 13
     value unit
                             119 non-null
                                              object
 14
     value type
                             142 non-null
                                              object
dtypes: object(15)
memory usage: 42.2+ KB
```

Export to csv

```
olympic_results_peru.to_csv('olympic_results_peru.csv', index=False)
```

Temporal distribution

Question: How has the participation of Peruvian athletes in the Olympics varied over the years?

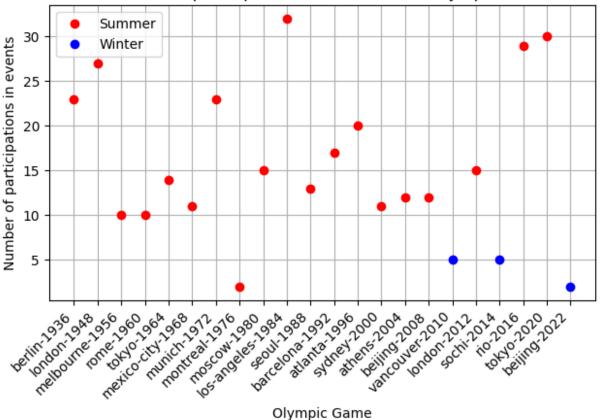
```
# Load the dataset containing Olympic game details (season and year)
olympic hosts = pd.read csv('./olympic hosts.csv', header=0)
olympic hosts = olympic hosts[['game slug',
'game_season','game_year']]
olympic hosts.head()
          game slug game season
                                 game year
0
       beijing-2022
                         Winter
                                       2022
1
         tokyo-2020
                                       2020
                         Summer
2
  pyeongchang-2018
                         Winter
                                       2018
3
           rio-2016
                         Summer
                                       2016
4
         sochi-2014
                         Winter
                                      2014
# Merge the Peruvian athlete results with the Olympic game details
olympic results peru v2 = pd.merge(olympic results peru,
olympic_hosts, left_on='slug_game', right_on='game_slug', how='left')
olympic results peru v2 =
olympic results peru v2.drop(columns=['game slug'])
olympic results peru v2.head()
  discipline title
                                  event title
                                                   slug game
participant type \
     Alpine Skiing
                         Women's Giant Slalom beijing-2022
Athlete
                               Women's Slalom
     Alpine Skiing
                                                beijing-2022
Athlete
          Shooting 25m Rapid Fire Pistol Men
                                                  tokyo-2020
Athlete
          Shooting
                                     Trap Men
                                                  tokyo-2020
Athlete
                           10m Air Pistol Men
          Shooting
                                                  tokyo-2020
Athlete
  medal type athletes rank equal rank position country name
country code
0
         NaN
                  NaN
                           False
                                             46
                                                        Peru
PE
         NaN
                  NaN
                           False
                                             44
1
                                                        Peru
PE
2
         NaN
                  NaN
                           False
                                             18
                                                        Peru
PE
3
         NaN
                  NaN
                           False
                                             27
                                                        Peru
```

```
PE
                           False
                                             29
4
         NaN
                  NaN
                                                        Peru
PE
  country 3 letter code
athlete url \
                    PER
                         https://olympics.com/en/athletes/ornella-
oettl...
                    PER
                         https://olympics.com/en/athletes/ornella-
oettl...
                    PER
                           https://olympics.com/en/athletes/marko-
carrillo
                         https://olympics.com/en/athletes/alessandro-
3
                    PER
de...
                    PER
                           https://olympics.com/en/athletes/marko-
carrillo
              athlete full name value unit value type game season
game_year
            Ornella OETTL REYES
                                   2:24.05
                                                  TIME
                                                            Winter
2022
                                   2:04.59
            Ornella OETTL REYES
                                                  TIME
                                                            Winter
1
2022
                 Marko CARRILLO
                                        NaN
                                                   NaN
                                                            Summer
2020
3 Alessandro DE SOUZA FERREIRA
                                        NaN
                                                   NaN
                                                            Summer
2020
4
                 Marko CARRILLO
                                        NaN
                                                   NaN
                                                            Summer
2020
# Group by year, game, and season to calculate the number of
participations
participation = olympic results peru v2.groupby(['game year',
'slug game',
'game season']).size().reset index(name='num participations')
participation = participation.sort values('game year')
fig, ax = plt.subplots()
for _, row in participation.iterrows():
    if row['game season'] == 'Summer':
        ax.plot(row['slug_game'], row['num_participations'], 'ro',
label='Summer' if 'Summer' not in ax.get_legend_handles_labels()[1]
else "")
    else:
        ax.plot(row['slug game'], row['num participations'], 'bo',
label='Winter' if 'Winter' not in ax.get legend handles labels()[1]
else "")
ax.set title("Peru's participation in events at the Olympics")
```

```
ax.set_xlabel('Olympic Game')
ax.set_ylabel('Number of participations in events')

plt.xticks(rotation=45, ha='right')
plt.tight_layout()
plt.legend()
plt.grid(True)
plt.show()
```

Peru's participation in events at the Olympics



Answer: In the Summer Olympics, Peru does not seem to have a marked trend in the number of participations, being in most cases between 10 to 20 events per Olympic Games. On the other hand, at the Winter Olympics, Peru has just three attendances and a maximum of five events per Olympic Games.

Performance analysis

Question: What is the discipline in which Peruvian athletes have obtained the best rankings?

```
# Convert rank positions to numeric values, handling non-numeric
entries as NaN
olympic_results_peru_v2['rank_position'] =
```

```
pd.to numeric(olympic results peru v2['rank position'],
errors='coerce')
# Filter to only include valid rank positions
olympic valid ranks =
olympic results peru v2[olympic results peru v2['rank position'].notna
()]
# Find the best (lowest) rank position for each discipline
best ranks = olympic valid ranks.groupby('discipline title')
['rank position'].min().reset index()
best ranks.sort values('rank position').head(10)
                     rank position
   discipline title
18
           Shooting
                                1.0
25
                                2.0
         Volleyball
21
           Swimming
                                4.0
23
          Taekwondo
                                5.0
4
             Boxina
                                5.0
19
      Skateboarding
                                5.0
12
           Football
                                5.0
3
         Basketball
                                7.0
14
             Karate
                               7.0
26
      Weightlifting
                                7.0
```

Answer: The disciplines with the best rankings for Peru were Shooting and Volleyball, both of which won medals.

Medals and Achievements

Question: In which disciplines have Peruvian athletes achieved top positions, even if they did not win medals?

```
# Filter out rows where no medal was won and rank positions are valid
olympic no medals =
olympic results peru v2[olympic results peru v2['medal type'].isna() &
olympic results peru v2['rank position'].notna()]
# Find the best rank positions by discipline and event
best positions = olympic no medals.groupby(['discipline title',
'event title'])['rank position'].min().reset index()
# Convert the result to a DataFrame and sort by rank position
best positions df = pd.DataFrame(best positions)
best positions df.sort values('rank position').head(20)
                                       event title rank position
    discipline title
113
         Volleyball
                                  volleyball women
                                                              4.0
```

82	Shooting	trap 125 targets men	4.0
98	Swimming	200m individual medley men	4.0
25	Boxing	57-60kg lightweight men	5.0
41	Football	football men	5.0
28	Boxing	81kg heavyweight men	5.0
110	Taekwondo	58 - 68 kg men	5.0
79	Shooting	skeet (125 targets) men	5.0
83	Skateboarding	Men's Street	5.0
69	Shooting	50m pistol 60 shots men 50m rifle prone 60 shots men	6.0
74	Shooting		6.0
20	Basketball	basketball men	7.0
109	Taekwondo	- 49 kg women	7.0
119	Weightlifting	63kg women	7.0
48	Karate	Women's Kumite -61kg	7.0
76	Shooting	Skeet Men	8.0
114	Weightlifting	+75kg women	8.0
29	Boxing	Men's Heavy (81-91kg)	9.0
22	Boxing	51-54kg bantamweight men	9.0
84	Surfing	Women	9.0

Answer: The disciplines with the best places without medals were Swimming, Boxing, Football, Taekwondo and Skateboarding.

Analysis of time values

Question: What have been the fastest times achieved by Peruvian athletes in timed disciplines?

```
from datetime import timedelta
temp = pd.DataFrame(olympic_results_peru_v2)
# Function to convert milliseconds to hh:mm:ss.s format
def milliseconds to hms(ms):
    if pd.isna(ms) or ms == 'no time' or ms == '':
        return 'no time'
    if ":" in ms:
        return ms
    try:
        ms = float(ms)
        hours = int(ms // 3600000)
        minutes = int((ms % 3600000) // 60000)
        seconds = (ms \% 60000) // 1000
        milliseconds = int(ms % 1000 / 100)
        return f"{hours:02}:{minutes:02}:{seconds:02}.{milliseconds}"
    except ValueError:
        return 'no time' # Return 'no time' if conversion fails
```

```
# Apply the conversion function to the 'value unit' column for TIME
values
temp['value_unit'] = temp.apply(lambda row:
milliseconds to hms(row['value unit'])
                            if row['value type'] == 'TIME' else
row['value unit'], axis=1)
temp[['value_unit', 'value_type']].head()
  value unit value_type
     2:24.05
0
     2:04.59
1
                   TIME
2
                    NaN
         NaN
3
         NaN
                    NaN
4
         NaN
                    NaN
# Filter to include only TIME values, excluding 'no time'
olympic results times = temp[temp['value type'] == 'TIME']
olympic results times =
olympic results times[olympic results times['value unit'] != 'no
time'l
# Function to convert hh:mm:ss.s format to seconds
def convert time(time str):
    min sec = time str.split(':')
    minutes = int(min sec[0])
    seconds = float(min sec[1])
    total seconds = minutes * 60 + seconds
    time delta = timedelta(seconds=total seconds)
    hours, remainder = divmod(total seconds, 3600)
    minutes, seconds = divmod(remainder, 60)
    return f"{int(hours):02}:{int(minutes):02}:{seconds:05.2f}"
# Apply the time conversion function to ensure uniform time formatting
olympic results times['value unit'] = olympic results times.apply(
    lambda row: convert_time(row['value_unit']) if
len(row['value unit']) == 7 else row['value unit'],
    axis=1
)
olympic results times.head()
   discipline title
                              event title
                                              slug game
participant type \
      Alpine Skiing Women's Giant Slalom beijing-2022
Athlete
     Alpine Skiing
                           Women's Slalom
                                           beijing-2022
```

```
Athlete
          Athletics
                             50km walk men
                                                 rio-2016
37
Athlete
39
          Athletics
                            marathon women
                                                 rio-2016
Athlete
          Athletics
                            marathon women
                                                 rio-2016
Athlete
   medal_type athletes rank equal
                                    rank position country name
country_code \
          NaN
                    NaN
                             False
                                              46.0
                                                           Peru
PE
1
          NaN
                    NaN
                             False
                                              44.0
                                                           Peru
PE
37
                                              48.0
          NaN
                    NaN
                               NaN
                                                           Peru
PE
39
          NaN
                               NaN
                                              15.0
                    NaN
                                                           Peru
PE
40
          NaN
                    NaN
                               NaN
                                              36.0
                                                           Peru
PE
   country 3 letter code
athlete url \
                      PER
                           https://olympics.com/en/athletes/ornella-
oettl...
                      PER
                           https://olympics.com/en/athletes/ornella-
oettl...
37
                              https://olympics.com/en/athletes/pavel-
                      PER
chihuan
                      PER
                              https://olympics.com/en/athletes/gladys-
39
tejeda
                      PER
                           https://olympics.com/en/athletes/jovana-de-
40
la-...
      athlete full name
                            value_unit value_type game_season
game year
    Ornella OETTL REYES
                           00:02:24.05
                                              TIME
                                                        Winter
2022
1
    Ornella OETTL REYES
                           00:02:04.59
                                             TIME
                                                        Winter
2022
37
          Pavel CHIHUAN
                          04:32:37.0.0
                                              TIME
                                                        Summer
2016
39
          Gladys TEJEDA 02:29:55.0.0
                                              TIME
                                                        Summer
2016
      Jovana DE LA CRUZ 02:35:49.0.0
40
                                              TIME
                                                        Summer
2016
# Convert the 'value_unit' column to timedelta for easier calculations
olympic_results_times['value_unit'] =
pd.to timedelta(olympic_results_times['value_unit'])
```

```
# Find the fastest times by event
fastest times = olympic results times.groupby('event title')
['value unit'].min()
fastest times.sort values()
event title
                             0 days 00:00:00.010000
K1 kayak single men
pentathlon women
                             0 days 00:00:24.040000
Women's Slalom
                             0 days 00:02:04.590000
200m individual medley men
                             0 days 00:02:11.080000
Women's Giant Slalom
                             0 days 00:02:24.050000
giant slalom men
                                    0 days 00:03:02
giant slalom women
                             0 days 00:03:06.030000
                             0 days 00:13:43.010000
5000m men
10000m men
                                    0 days 00:28:02
15km men
                             0 days 00:45:53.060000
20km walk men
                                    0 days 01:24:48
20km race walk women
                                    0 days 01:32:09
marathon men
                                    0 days 02:15:35
marathon women
                                    0 days 02:28:54
team time trial men
                             0 days 02:30:57.050000
50km walk men
                                    0 days 04:32:37
Name: value unit, dtype: timedelta64[ns]
# Function to get the fastest time and corresponding details
def get fastest time and slug(df):
    min times = df.loc[df.groupby('event title')
['value_unit'].idxmin()]
    result = min times[['slug game', 'discipline title',
'event_title', 'athlete_full_name', 'value_unit']]
    return result
# Apply the function to get the fastest times and sort by time
fastest times = get fastest time and slug(olympic results times)
fastest times sorted = fastest times.sort values(by='value unit')
fastest times sorted
          slug game
                         discipline title
                                                           event title
141 barcelona-1992
                             Canoe Slalom
                                                  K1 kayak single men
234
        munich-1972
                                Athletics
                                                     pentathlon women
       beijing-2022
                            Alpine Skiing
                                                       Women's Slalom
```

230	munich-1972	Cuimmina 2	200m individual medley men
		_	Ž
0	beijing-2022	Alpine Skiing	Women's Giant Slalom
82	vancouver-2010	Alpine Skiing	giant slalom men
61	sochi-2014	Alpine Skiing	giant slalom women
48	rio-2016	Athletics	5000m men
49	rio-2016	Athletics	10000m men
85	vancouver-2010 Cro	ss Country Skiing	15km men
45	rio-2016	Athletics	20km walk men
46	rio-2016	Athletics	20km race walk women
73	london-2012	Athletics	marathon men
70	london-2012	Athletics	marathon women
224	munich-1972	Cycling Road	team time trial men
37	rio-2016	Athletics	50km walk men
141 234 1 230 0 82 61 48 49 85 45 46 73 70 224 37	Edith NODING Ornella OETTL REYES Juan Carlos BELLO Ornella OETTL REYES Manfred OETTL REYES Ornella OETTL REYES David TORRENCE Luis OSTOS Roberto CARCELEN Paolo YURIVILCA Kimberly GARCIA Raul PACHECO Ines MELCHOR	0 days 00:00:00.010 0 days 00:00:24.040 0 days 00:02:04.590 0 days 00:02:11.080 0 days 00:02:24.050 0 days 00:03:06.030 0 days 00:13:43.010 0 days 00:28 0 days 00:45:53.060 0 days 01:24 0 days 01:32 0 days 02:15	0000 0000 0000 0000 0000 3:02 0000 3:02 0000 4:48 2:09 5:35 3:54

Answer: The best time in Women's Slalom was achieved by Ornella Oettl in 2022. In 200m individual medley men, it was Juan Carlos Bello in 1972. Also noteworthy is the fact that in 2016 the best times were obtained in different athletics events.

Performance Evolution per Athlete

Question: Are there patterns of improvement or regression in the times achieved by Peruvian athletes in specific disciplines over the years?

```
olympic results times.head()
   discipline title
                               event title
                                                slug game
participant type \
                     Women's Giant Slalom
      Alpine Skiing
                                             beijing-2022
Athlete
                                             beijing-2022
      Alpine Skiing
                            Women's Slalom
1
Athlete
          Athletics
                             50km walk men
                                                 rio-2016
37
Athlete
          Athletics
                            marathon women
                                                 rio-2016
Athlete
40
          Athletics
                            marathon women
                                                 rio-2016
Athlete
   medal_type athletes rank_equal rank_position country name
country code
          NaN
                             False
                                              46.0
                    NaN
                                                            Peru
PE
          NaN
                    NaN
                             False
                                              44.0
                                                            Peru
1
PE
37
          NaN
                    NaN
                               NaN
                                              48.0
                                                           Peru
PE
39
          NaN
                    NaN
                               NaN
                                              15.0
                                                           Peru
PE
40
          NaN
                    NaN
                               NaN
                                              36.0
                                                           Peru
PE
   country_3_letter_code
athlete url \
                           https://olympics.com/en/athletes/ornella-
                      PER
oettl...
                      PER
                           https://olympics.com/en/athletes/ornella-
1
oettl...
                              https://olympics.com/en/athletes/pavel-
                      PER
37
chihuan
                              https://olympics.com/en/athletes/gladys-
39
                      PER
tejeda
                           https://olympics.com/en/athletes/jovana-de-
40
                      PER
la-...
      athlete full name
                                     value unit value_type game_season
    Ornella OETTL REYES 0 days 00:02:24.050000
0
                                                       TIME
                                                                  Winter
```

```
1
    Ornella OETTL REYES 0 days 00:02:04.590000
                                                      TIME
                                                                Winter
37
                               0 days 04:32:37
                                                      TIME
          Pavel CHIHUAN
                                                                Summer
39
          Gladys TEJEDA
                                0 days 02:29:55
                                                      TIME
                                                                Summer
40
      Jovana DE LA CRUZ
                               0 days 02:35:49
                                                                Summer
                                                      TIME
    game_year
0
         2022
         2022
1
37
         2016
39
         2016
40
         2016
temp_2 = pd.DataFrame(olympic_results_times)
# Convert timedelta to seconds for numerical analysis
def timedelta to seconds(timedelta):
    if pd.isna(timedelta):
        return None
    return timedelta.total seconds()
# Add a new column for time in seconds
temp 2['time seconds'] =
temp 2['value unit'].apply(timedelta to seconds)
temp 2['game year'] = pd.to numeric(temp 2['game year'],
errors='coerce')
# Filter to include only valid time values
valid times = temp 2[temp 2['time seconds'].notna()]
# Group by athlete, discipline, and year to calculate average times
grouped = valid times.groupby(['athlete full name',
'discipline title', 'game year'])['time seconds'].mean().reset index()
# Count participations per athlete and discipline, and filter those
with at least 2 participations
participations = grouped.groupby(['athlete full name',
'discipline title']).size().reset index(name='participations')
athletes with min participations =
participations[participations['participations'] >= 2]
# Filter the grouped data to include only athletes with the minimum
required participations
filtered grouped =
grouped.merge(athletes with min participations[['athlete full name',
'discipline title']],
                                 on=['athlete full name',
```

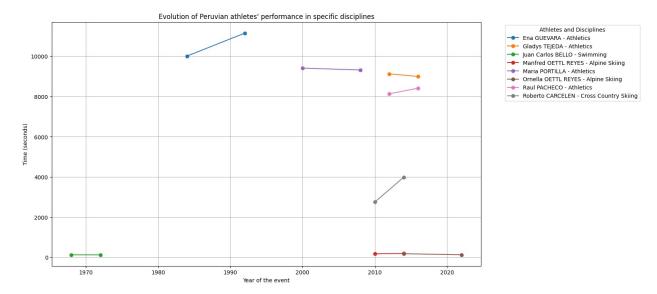
```
'discipline_title'])
# Plot the evolution of performance over time
fig, ax = plt.subplots(figsize=(14, 8))

for (athlete, discipline), group_data in
filtered_grouped.groupby(['athlete_full_name', 'discipline_title']):
    ax.plot(group_data['game_year'], group_data['time_seconds'],
marker='o', label=f'{athlete} - {discipline}')

ax.set_title("Evolution of Peruvian athletes' performance in specific disciplines")
ax.set_xlabel('Year of the event')
ax.set_ylabel('Time (seconds)')

ax.legend(loc='best', bbox_to_anchor=(1.05, 1), title='Athletes and Disciplines', frameon=True)

plt.grid(True)
plt.show()
```



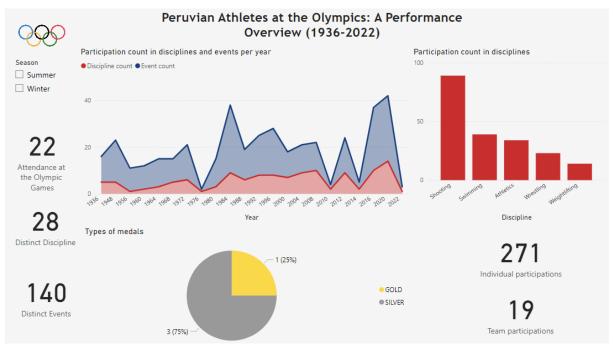
Answer: Most athletes increased their time after their first participation or had no major variation. However, the improvement in the athletes Gladys Tejeda and Ornella Oettl, who reduced their time compared to their first participation, stands out.

Export to CSV (DataFrame with time (seconds))

```
# Export to csv (time)
# valid_times.to_csv('olympic_results_peru_time_seconds.csv',
index=False)
```

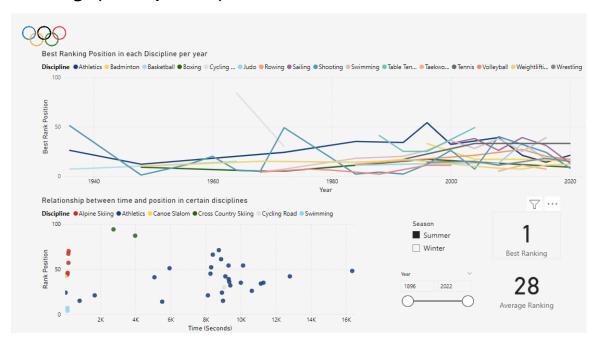
Dashboard in Power BI

Participations and Medals



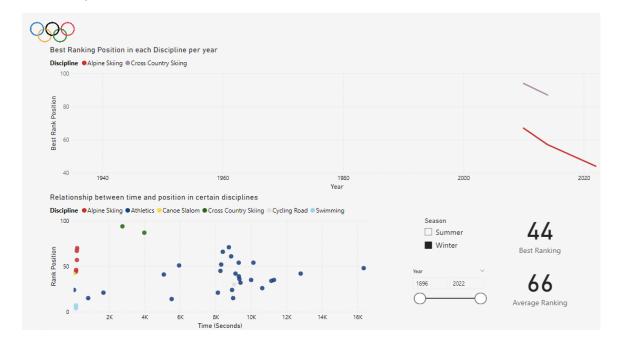
Peru has attended 22 Olympic Games. In 22 disciplines and 140 events throughout its history. Until 2022, it won one gold medal and three silver medals. And, the discipline with the highest participation was Shooting, followed by Swimming and Athletics.

Ranking (Disciplines)

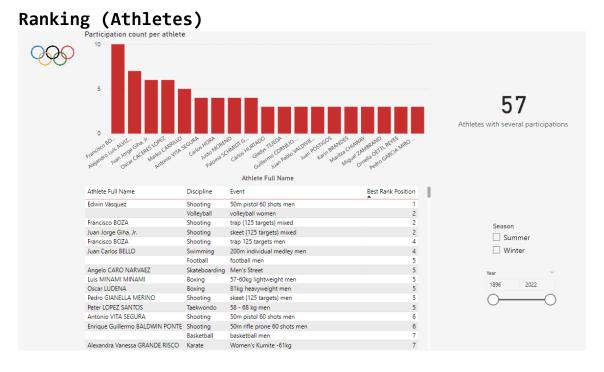


In the Summer Olympics, the best ranking was 1, and the average ranking was 28. In terms of disciplines, it highlights the first

places obtained in Volleyball until it stopped participating in 2000. Also, in the Shooting discipline in the last editions, the best positions have been obtained again, as well as Sailing (in which a bronze medal was obtained in Paris 2024) and Athletics (where fourth places were obtained in Paris 2024). On the other hand, concern should be expressed in disciplines such as Swimming and Tennis, where no improvement in their rankings can be observed, as well as in several other disciplines that have lost representatives in the last editions.



In the Olympic Winter Games, despite the few participations that Peru had, there were improvements in the rankings obtained.



The athlete with the highest participation in the Olympic Games is Francisco Boza. Also, 57 athletes throughout history have attended the Olympic Games more than once.