

Olympics Insights

Analysis of 120 years of Olympic History Dataset

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Client's Expectation

Client

SportsStats is a sports analysis firm partnering with local news and elite personal trainers to provide “interesting” insights to help their partners.

Expectation

Client wants to provide patterns/trends highlighting certain groups/events/countries, etc. for the purpose of developing a news story or discovering key health insights.

Questions to Answer

1. **Top 5 Olympic Dominant nations over a sustained period**
2. **Olympic Legends for each game who sustained success over several Olympic cycles.**
3. **Maximum participation and medals won among Males and Females in India**
4. **Trend in Anthropometric measures of top performing athletes for each sport**

Initial Hypothesis

1. India's participation in the recent years might have improved
 2. Olympic legends might have achieved >5 medals in their lifetime
 3. Top performing athletes might belong to the Developed countries.
 4. Women's participation would have increased in past 60 years
 5. All the regions mentioned in the `Athelets_events` table should match with the `Noc_regions` tables
 6. For all the Games happened, dataset will provide information on gold, silver, and bronze medallists.
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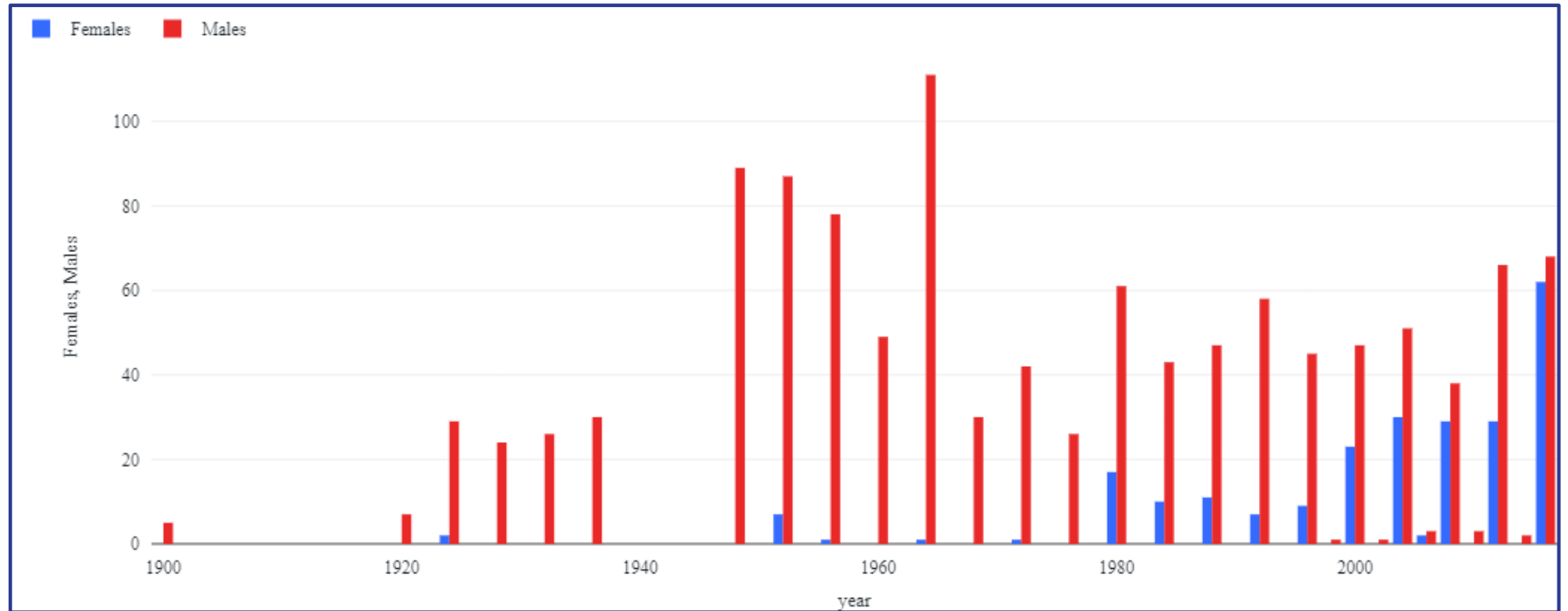
Initial Findings

- Number of countries participated till 2016 is 207
- Identified list of Gold medalist for each sport in each year
- India's participation has drastically increased since it's independence i.e., from the year 1947
- Average BMI index lies between 20 to 25 for each sport as shown in the Scatter plot graph whereas Box Plot provides median for each sport



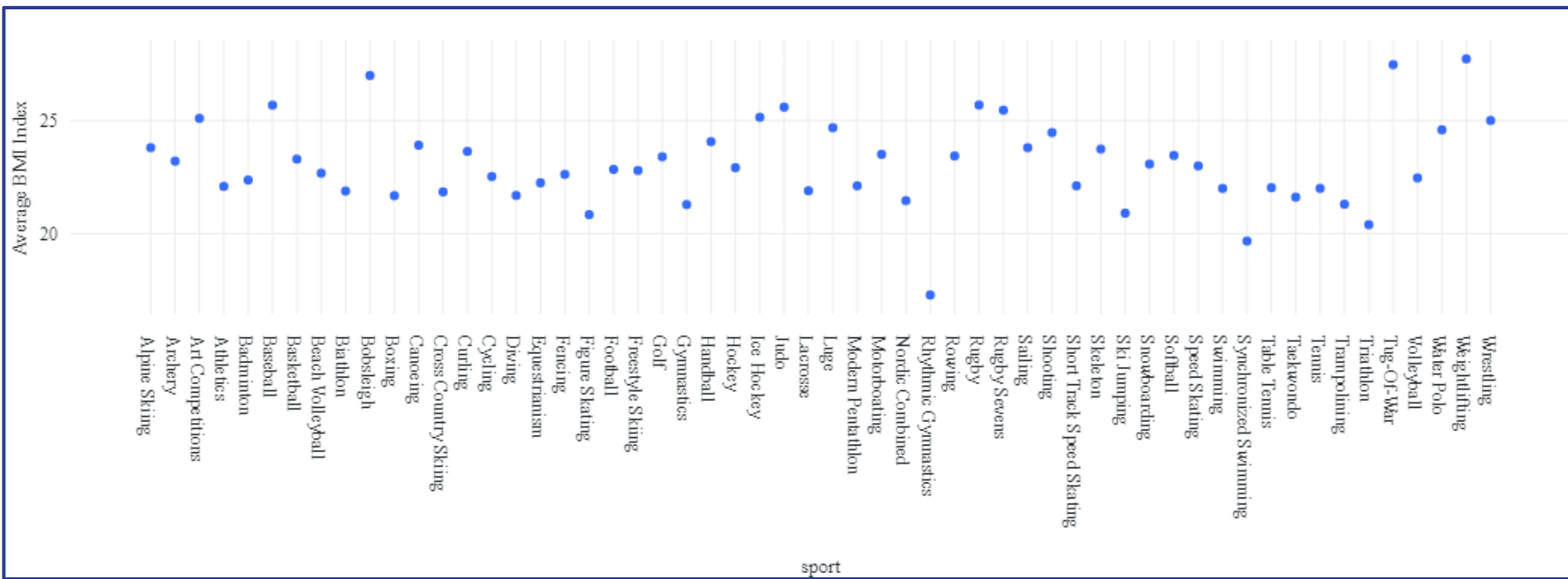
Initial Findings

Participation Trend based on Gender



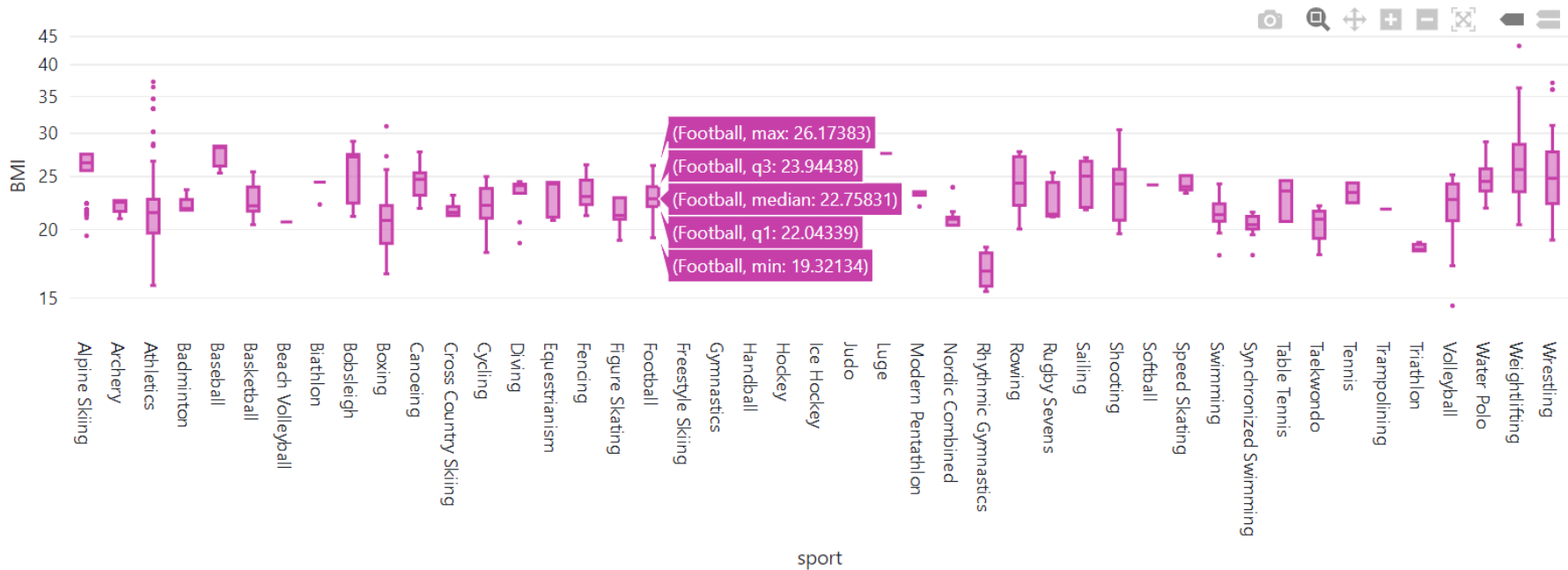
Initial Findings

Average BMI Index of players for each sport



Initial Findings

Average BMI Index of players for each sport



Deeper Analysis

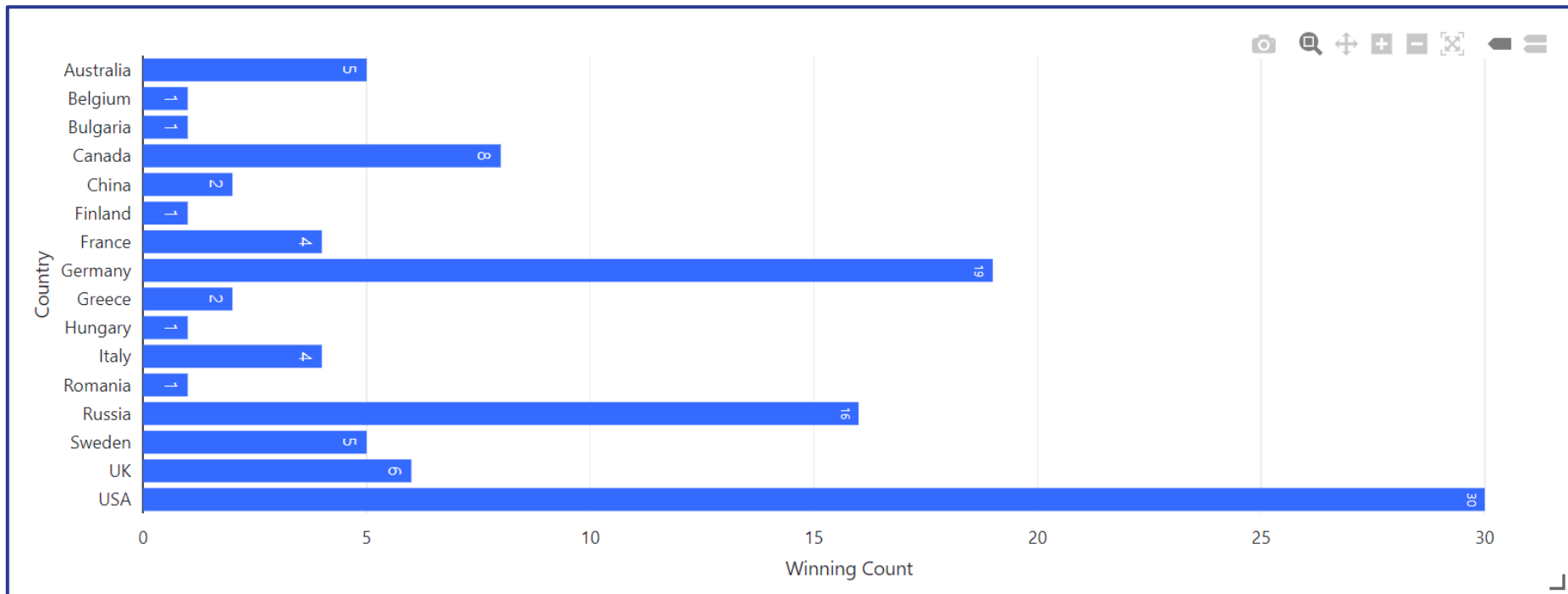
Olympic Dominant Nations

- The top consistent performing countries across a variety of sports are referred to as "Olympic powerhouses" or "dominant Olympic nations".
- Top 5 Dominant nations are USA, Germany, Russia, Canada, UK
- The above 5 nations are largest economies in the world.



Deeper Analysis

Olympic Dominant Nations



Deeper Analysis

Olympic Legends

- The Olympic Legends are the consistent performers in each game in Olympics can achieving high rankings or medals in multiple Olympic games.
- Players with more than 5 medals are shortlisted as Olympic Legends in the below shown table



Deeper Analysis

Olympic Legends

sport	Olympic_Legends
Alpine Skiing	Kjetil Andr Aamodt
Archery	Gerard Theodor Hubert Van Innis
Athletics	Paavo Johannes Nurmi
Basketball	Teresa Edwards
Biathlon	Ole Einar Bjrndalen
Bobsleigh	Bogdan Musiol
Canoeing	Birgit Fischer-Schmidt
Cross Country Skiing	Stefania Belmondo Raisa Petrovna Smetanina Marit Bjrgen
Cycling	Bradley Marc Wiggins
Diving	Dmitry Ivanovich Sautin

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sport	Olympic_Legends
Equestrianism	Isabelle Regina Werth
Fencing	Edoardo Mangiarotti
Gymnastics	Larysa Semenivna Latynina (Diriy-)
Ice Hockey	Jayna Hefford Hayley Marie Wickenheiser
Judo	Ryoko Tamura-Tani
Luge	Armin Zggeler
Modern Pentathlon	Pavel Serafimovich Lednyov
Nordic Combined	Felix Gottwald
Rowing	Elisabeta Oleniuc-Lip
Sailing	Torben Schmidt Grael Robert Scheidt "Charles Benedict ""Ben"" Ainslie"

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Deeper Analysis

Olympic Legends

sport	Olympic_Legends
Shooting	Carl Townsend Osburn
Short Track Speed Skating	Yang Yang
Ski Jumping	Matti Ensio Nyknen (-Paanala)
Speed Skating	Claudia Pechstein
Swimming	Michael Fred Phelps, II
Synchronized Swimming	▶ Svetlana Alekseyevna Romashina Nataliya Sergeyevna Ishchenko Miya Tachibana Miho Takeda Huang Xuechen Anastasiya Semyor
Table Tennis	Wang Nan Wang Hao
Tennis	"Maxime Omer Mathieu ""Max"" Omer-Dcugis"
Water Polo	Dezs Gyarmati
Wrestling	Wilfried Dietrich

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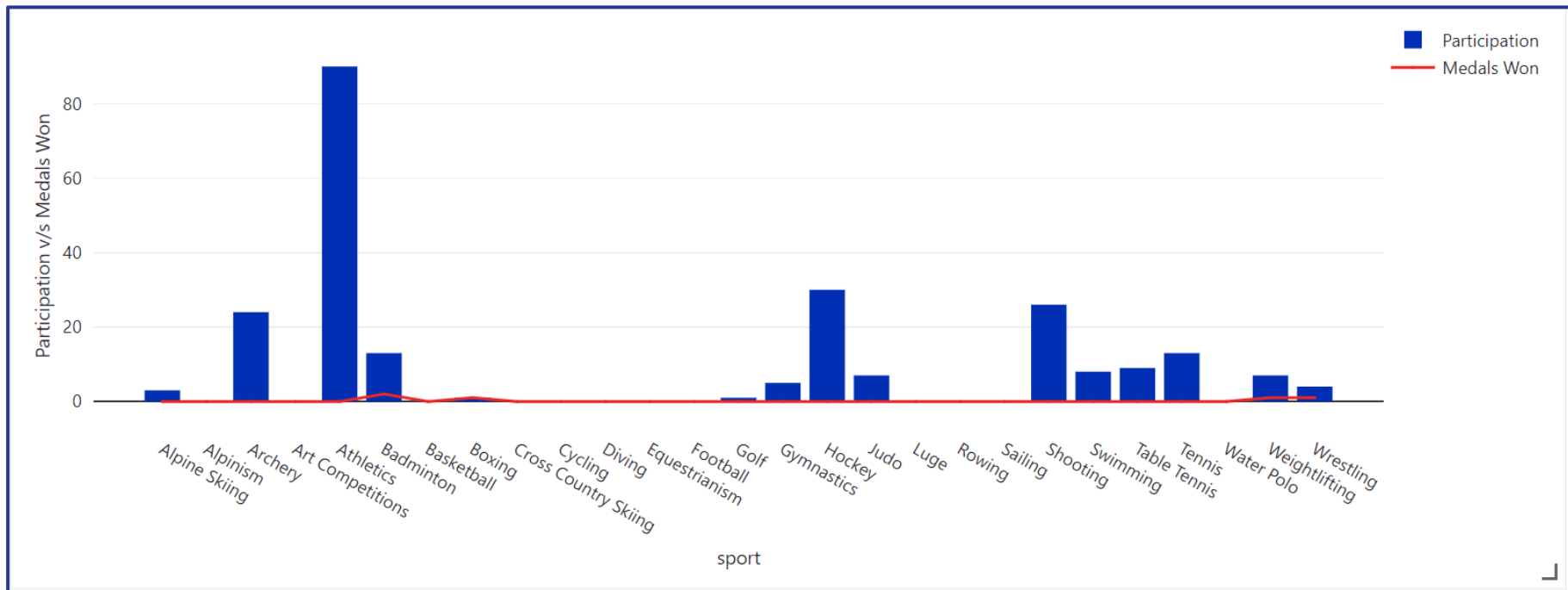
Deeper Analysis

India's participation v/s Medals won

- Females:
 - Females need support and resources to participate and compete at highest levels.
 - Maximum participation was seen in games like Athletics (90), Hockey (30), Shooting (26), Archery (24) and Badminton (13)
 - Maximum medals won in Badminton (2), Boxing(1), Weightlifting(1) and Wrestling(1)
 - Males:
 - Hockey (315), Athletics (179), Wrestling (100), Gymnastics (83), Shooting (79)
 - Maximum medals won in Hockey (173), Alpinism (7), Shooting (4), Wrestling (4), Athletics (2), Boxing (1)
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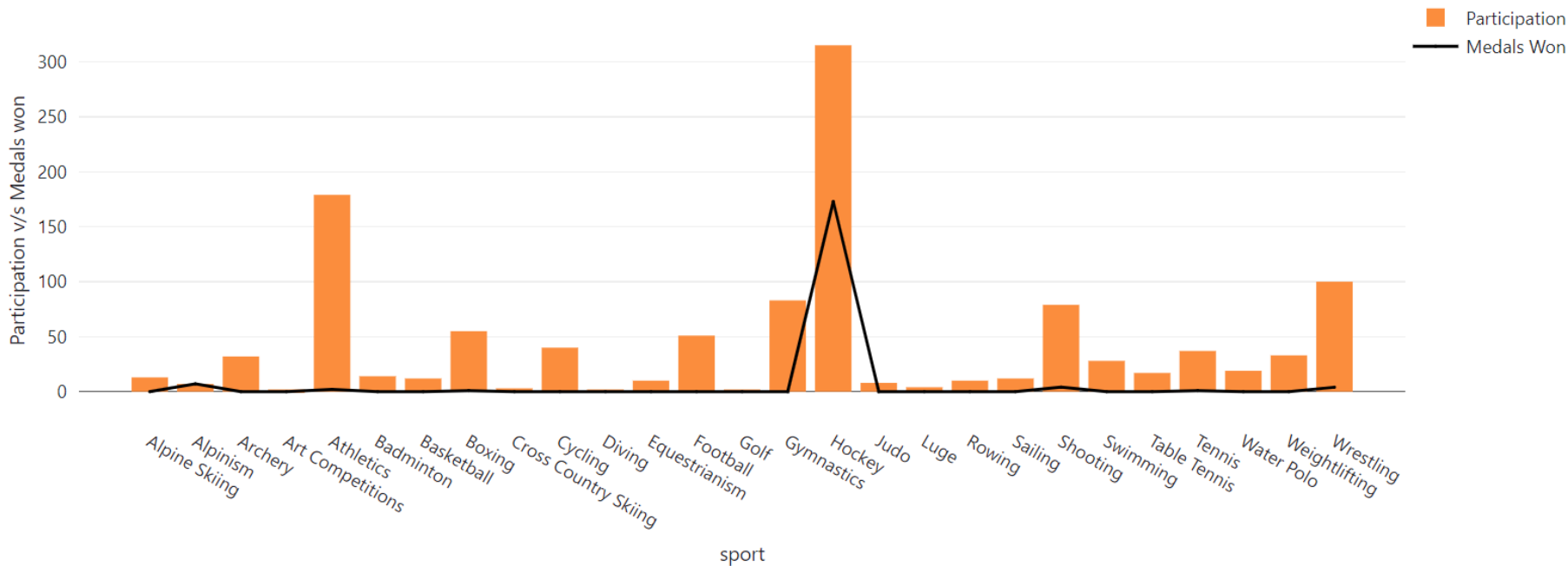
Deeper Analysis

India's participation v/s Medals won by Females



Deeper Analysis

India's participation v/s Medals won by Males



Deeper Analysis

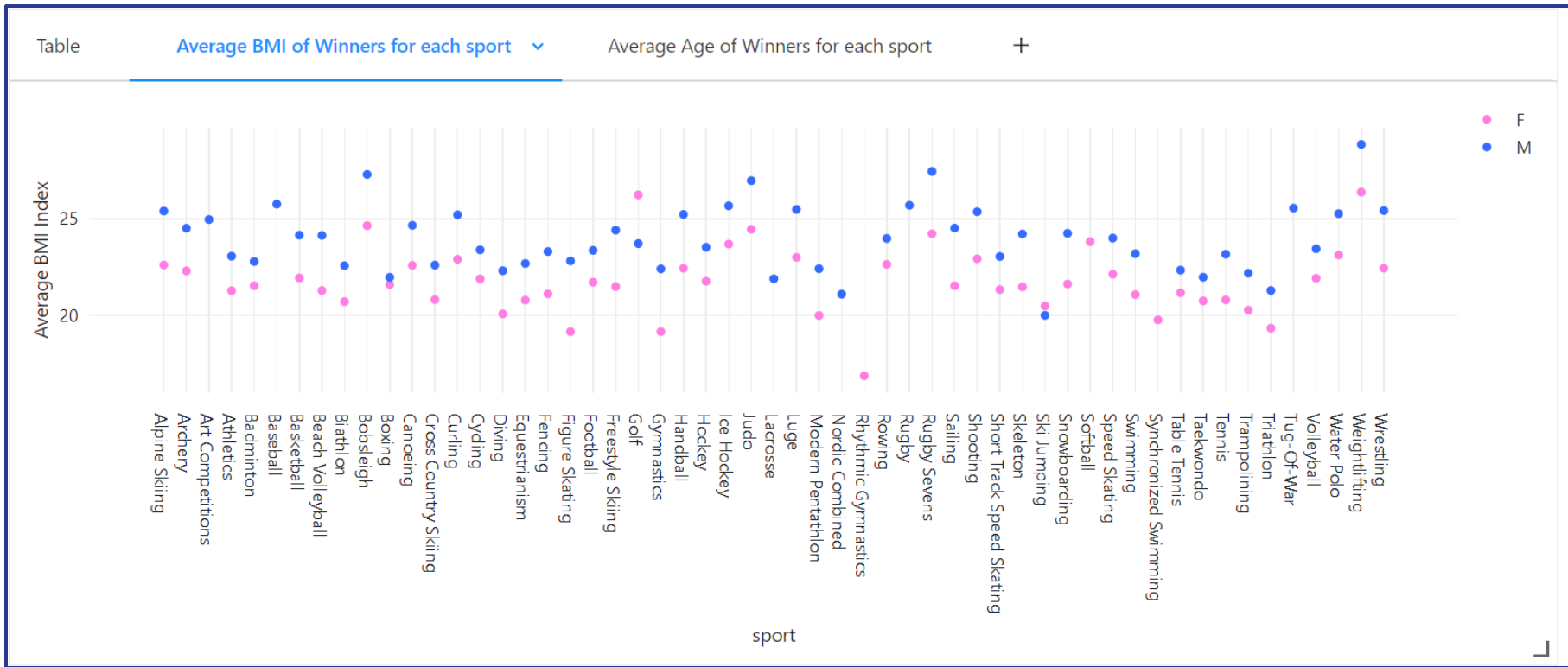
Average Anthropometric measures of top athletes

- Average BMI of Winners for each sport lies in the range of 20 to 25.
- In almost all games, average BMI index of women winners is less than Men's BMI in each sport
- Average age of winners lie between 25 to 30 for all games with negligible difference between Males and Females



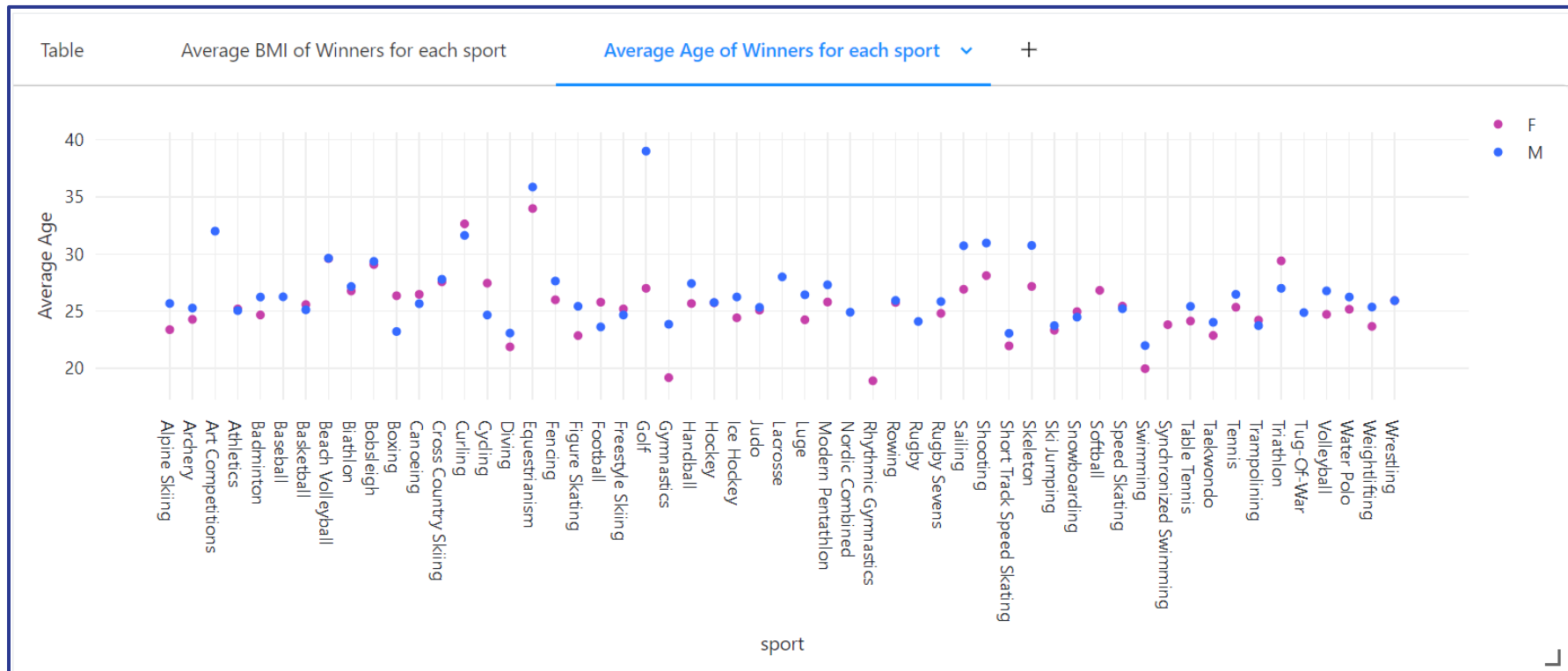
Deeper Analysis

Average Anthropometric measures of top athletes



Deeper Analysis

Average Anthropometric measures of top athletes



Final Findings

1. Identified Olympic Dominant nations clearly indicate that they have surely spent more on “Player Transfer fees” to improve player’s overall performance
 2. These Legends are important in celebrating the history and significance of the Olympic Games and inspiring future generations of athletes to strive for greatness.
 3. Female participation has to be increased in India along more focus on training them to win maximum medals
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Project Link:

[Olympic Dataset Analysis on Databricks Platform](#)