REPORT OUT: PAST AND FUTURE OF EQUALITY AT THE OLYMPIC GAMES

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Target Audience: Non-profit Organization On Women-rights From Saudi Arabia

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- Review of Questions to Answer/ Hypotheses / Approach
- Discuss technical challenges
- Detail : Entity Relational Diagram
- Initial Findings
- Deeper Analysis
- Hypothesis Results

SECTION 1: QUESTIONS TO ANSWER

- Do historical attendances of women for given countries show milestones in gender-equality?
- Can we identify where the equality gap is higher?
- Can we predict future attendances for Saudi Arabia women, being the last country, entering the OG in 2012?
- What is the type of events and physiology that Saudi Arabia women would be best fit for winning the next OG?

SECTION 2 : INITIAL HYPOTHESIS

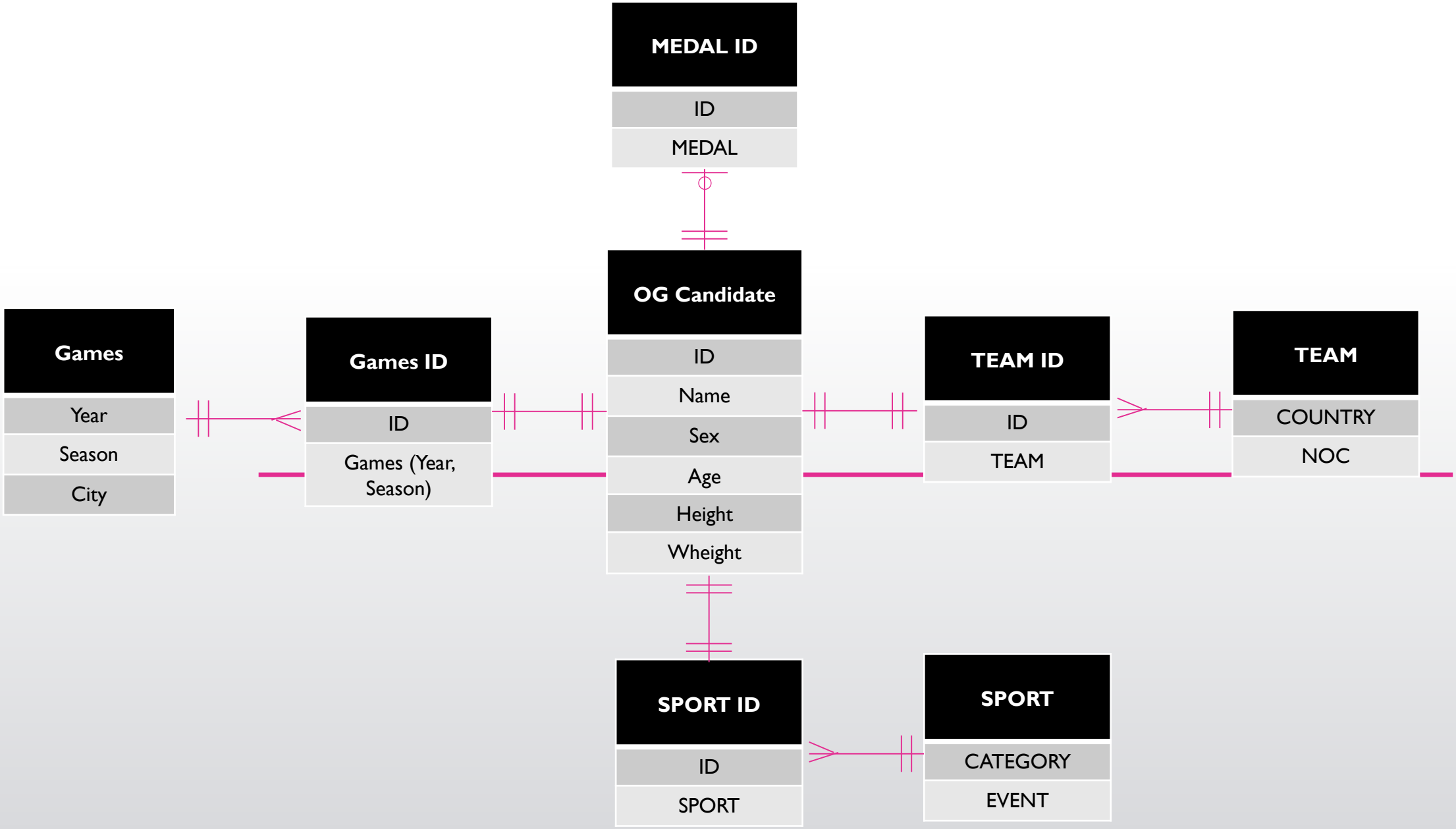
- I expect Western countries to have higher rates than Muslim countries.
- I expect that a given country attendance started from a relatively low quote and raised proportionally to both internal and external historical achievements. So looking at the slope of past OG we can identify women rights milestones achieved by countries across the globe and predict future attendances.
- I expect that the recent attendance of Saudi Arabia women at the OG is rapidly growing and that they perform better in summer events with body types fitted for athletics
- Therefore a non-profit organization on women-rights from Saudi Arabia might use these findings to further promote women attendance at the OG, encourage political awareness on the equality gap and the action needed to allow the cultural transition.

SECTION 3 : APPROACH

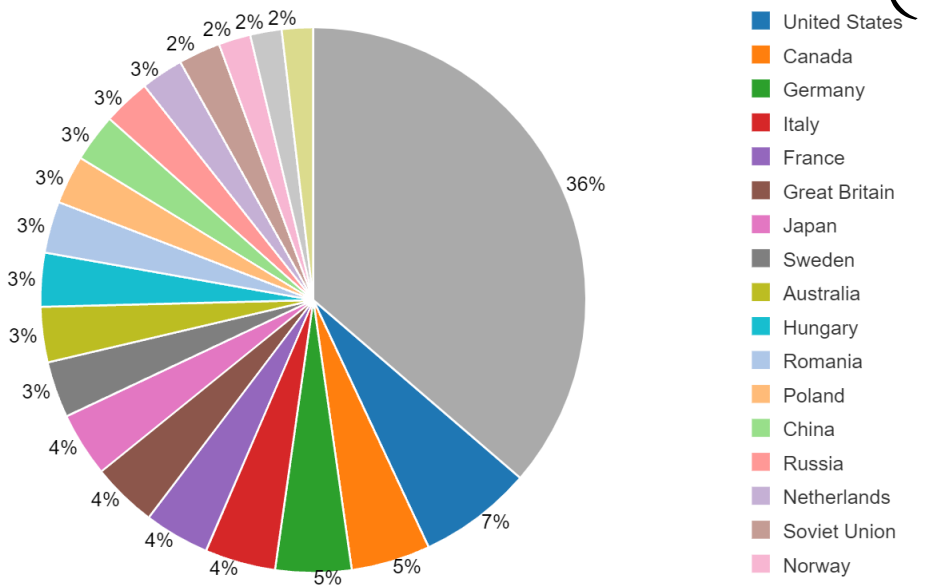
- I'll be looking at the attendance percentage of all women participating worldwide with respect to men from first year of women attendance at OG 1900 up to the 2016 OG, most recent record of my dataset.
- I'll be looking at the historical trends of Saudi Arabia and compare this with the trend of other country that are closer to women equality at the OG.
- I will need to look for events and body types of Saudi Arabia women who have won medals during the past OG and promote them accordingly.

TECHNICAL CHALLENGES

- I've noticed that some instances of the Team field are followed by -1 or -2. This would result in wrong data groups if later different IDs are grouped by country. Thus, I've proceeded with its removal.
- For the decision boundary fit on body types, the algorithm need integer values for targets instead of strings, so I've associated at each target an integer value

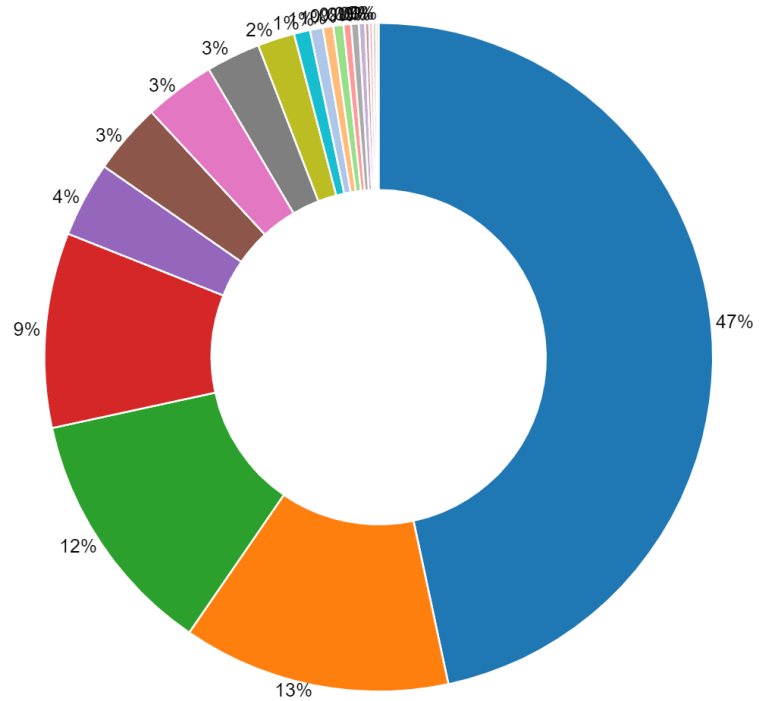

MEDAL ID
ID
MEDAL
OG Candidate
ID
Name
Sex
Age
Height
Wheight
Games
Year
Season
City
Games ID
ID
Games (Year, Season)
TEAM ID
ID
TEAM
TEAM
COUNTRY
NOC
SPORT ID
ID
SPORT
SPORT
CATEGORY
EVENT

INITIAL FINDINGS : equality gap higher in muslim countries



(= 20700 women)

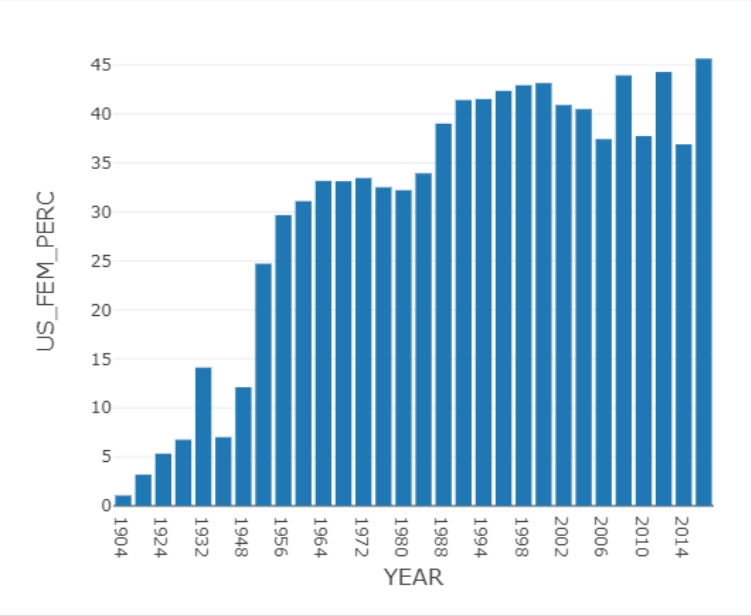
- Percentage of historical women attendance at the OG per country

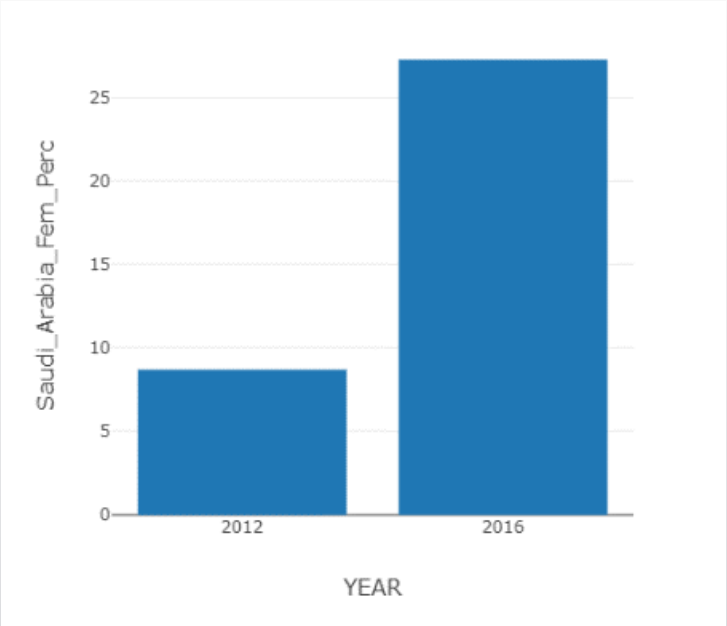


(= 2700 women)

- Percentage of historical women attendance at the OG per muslim country

INITIAL FINDINGS: US vs Saudi Arabia women attendance

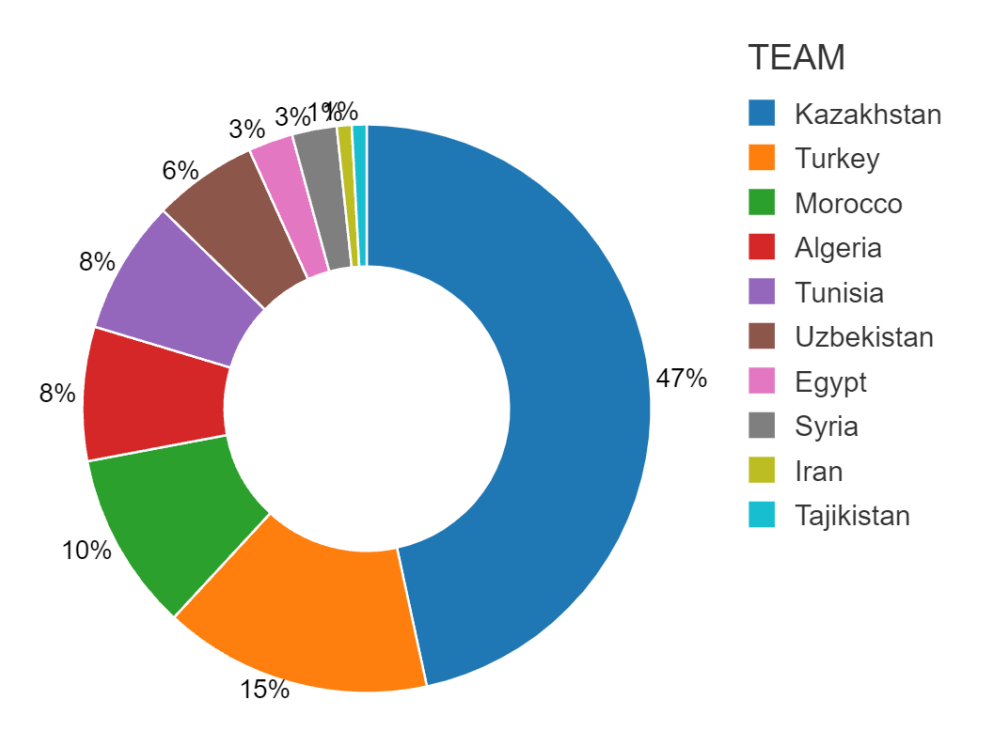


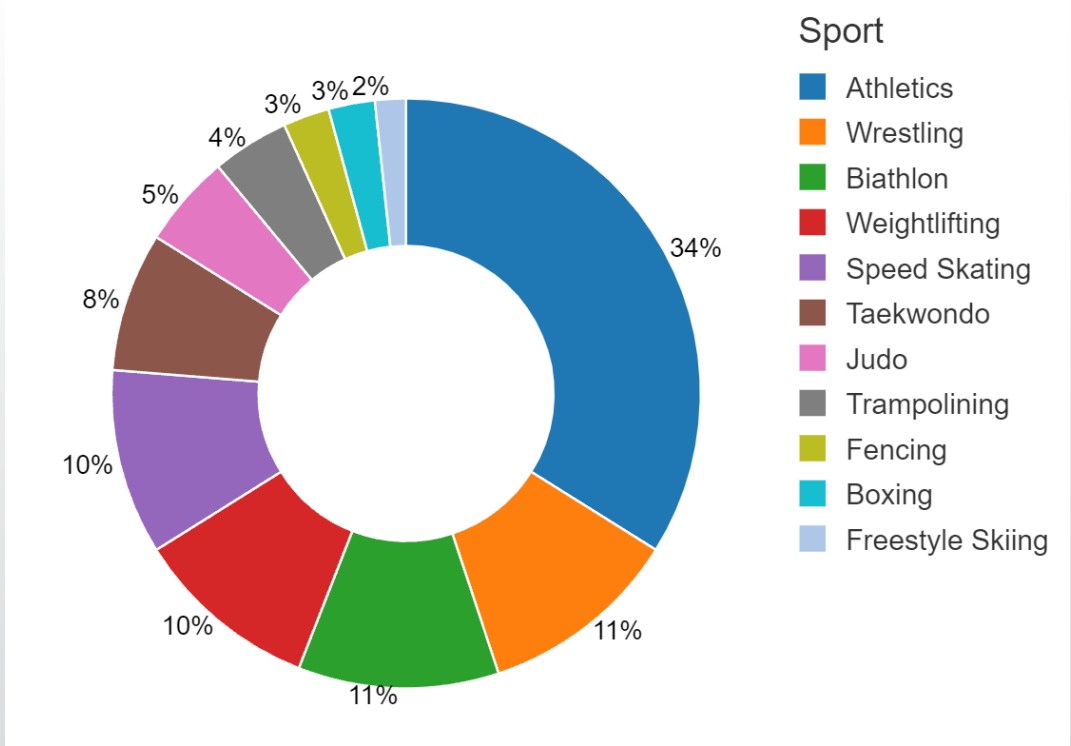


- Percentage of US women attendance at the OG:
- 25% reached in the first 50 years

- Percentage of Saudi Arabia women attendance at the OG:
- 25% reached in the first 4 years / no medals have been won

INITIAL FINDINGS: muslim women awarded up to date



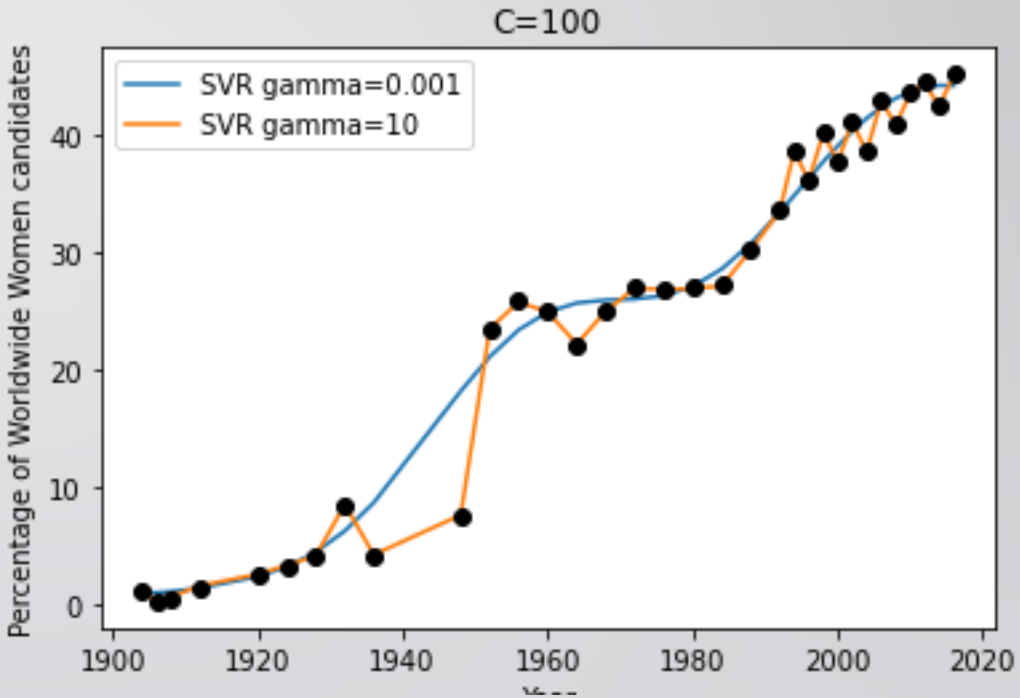


- Percentage of muslim countries awarded in women competitions
- Percentage of sport disciplines where muslim women have been awarded

DEEPER ANALYSIS (SUPPORT VECTOR REGRESSION)

Attendance Percentage Of Women Worldwide

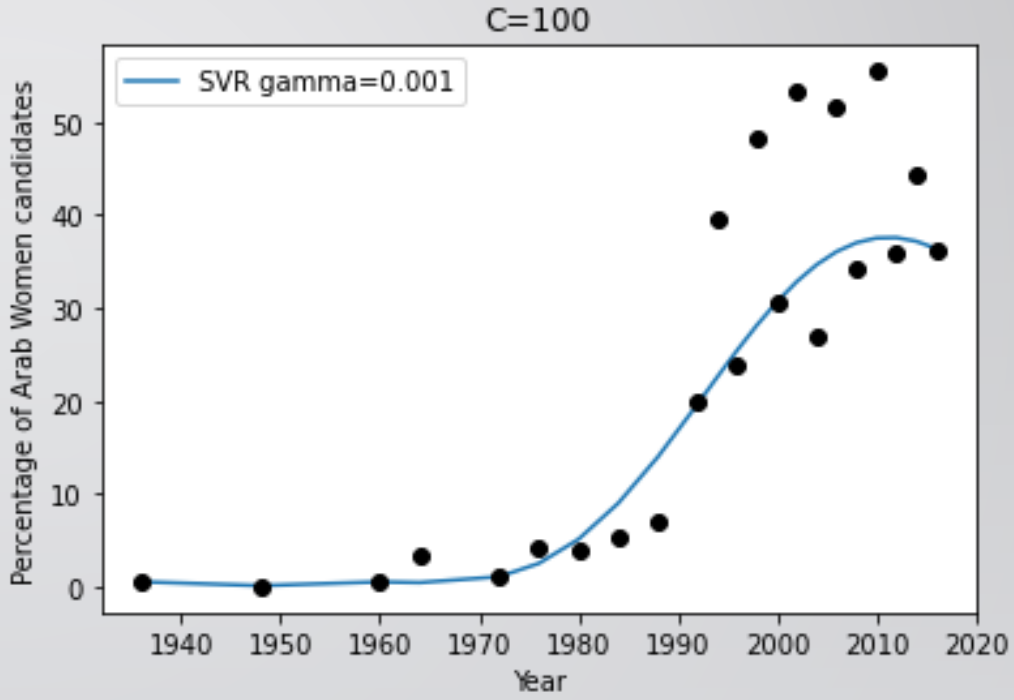
- Slope change in the 50's: western countries women rights (rights to vote and economic boom after WW2)
- Slope change in the 90's: Muslim countries women rights (Cairo Declaration on Human Rights in Islam)
- Saturation of attendance percentage towards 45%: a 5% gap is to be filled in the future.



DEEPER ANALYSIS (SUPPORT VECTOR REGRESSION)

Attendance Percentage Of Muslim Women

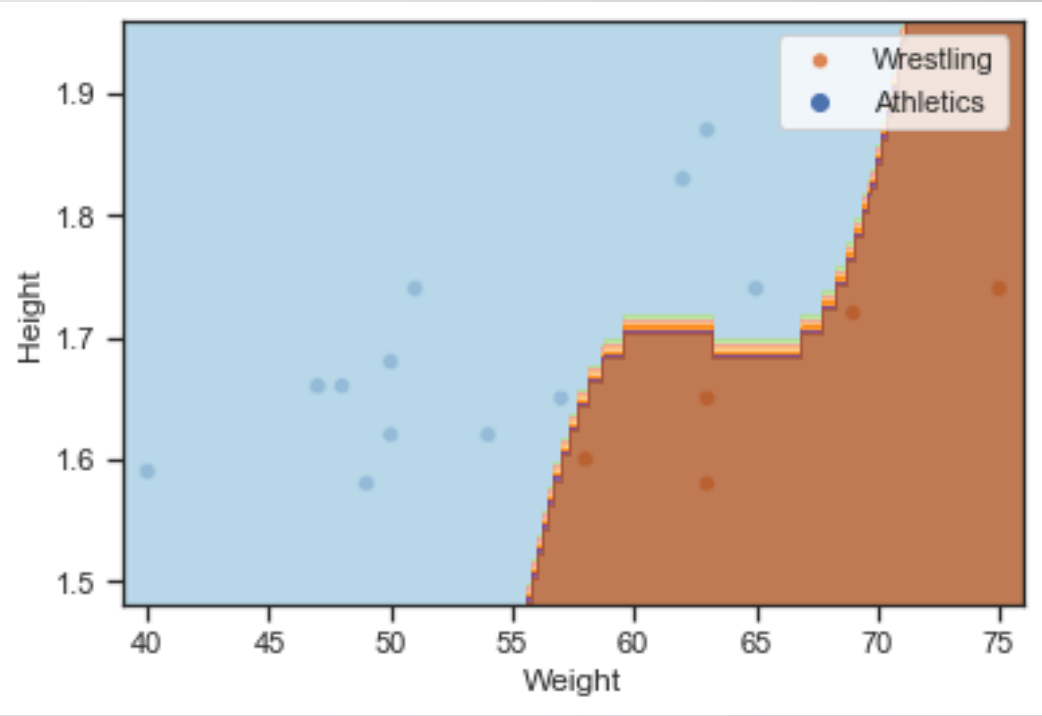
- Slope change in the 90's: Muslim countries women rights (Cairo Declaration on Human Rights in Islam)
- Saturation of attendance percentage towards 35%: a 15% gap is to be filled in the future.



DEEPER ANALYSIS (SUPPORT VECTOR CLASSIFICATION)

Winning body type at the next OGs

- The pie-chart on muslim women awarded by sport listed athletics and wrestling as the top two sports.
- Based on the past OG, we can predict that Saudi Arabia women with body type in the blue area on the right, have more chances to win in athletics and women in the orange area have more chances to win in wrestling.



HYPOTHESIS RESULTS :

- Historical OG worldwide women attendance peaked in correspondence of two main milestones in gender-equality such as: a) the rights to vote and economic boom after the WW2 in western countries and the Cairo Declaration on Human Rights in Islam in Muslim countries.

- Statistics show that equality gap is 15% in muslim countries and 5% in western countries.

- Saudi Arabia women were the last in the world to both achieve equal rights to vote in 2011 and to enter the OG in 2012. However they reached a record 25% of attendance in the first 4 years. Therefore these data provide a non-profit organization on women-rights from Saudi Arabia the reasons for encouraging political awareness on the equality gap and for empowering women. Their actions in equality promotion might results in the rise of women attendance at the next OG and other women rights.

- Saudi Arabia women might perform better in athletics and wrestling with disciminant body parameter being weight: 40-55kg for athletics and 55-75kg for wrestling.