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# ANALYZING FIFA WORLD CUP DATA

## PROJECT REPORT

SYEDA VIQUAR SULTANA

## PROJECT DETAILS & OBJECTIVE

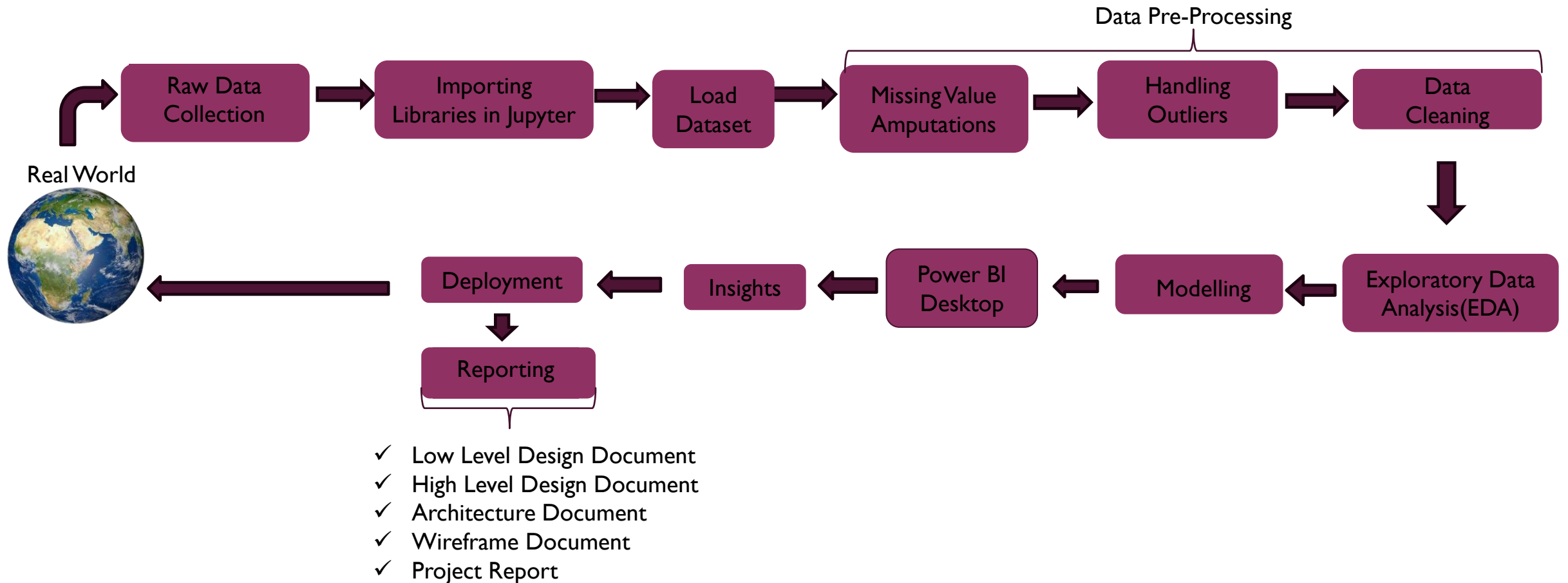
PROJECT TITLE	FIFA WORLD CUP ANALYSIS
Technology	Data Science
Domain	Sports Analytics
Project Difficulty Level	Advanced
Tools	Jupyter Notebook, Power BI, Microsoft Excel, Microsoft PowerPoint

**OBJECTIVE :** Finding key metrics and factors that influence the FIFA World Cup win.

# PROBLEM STATEMENT

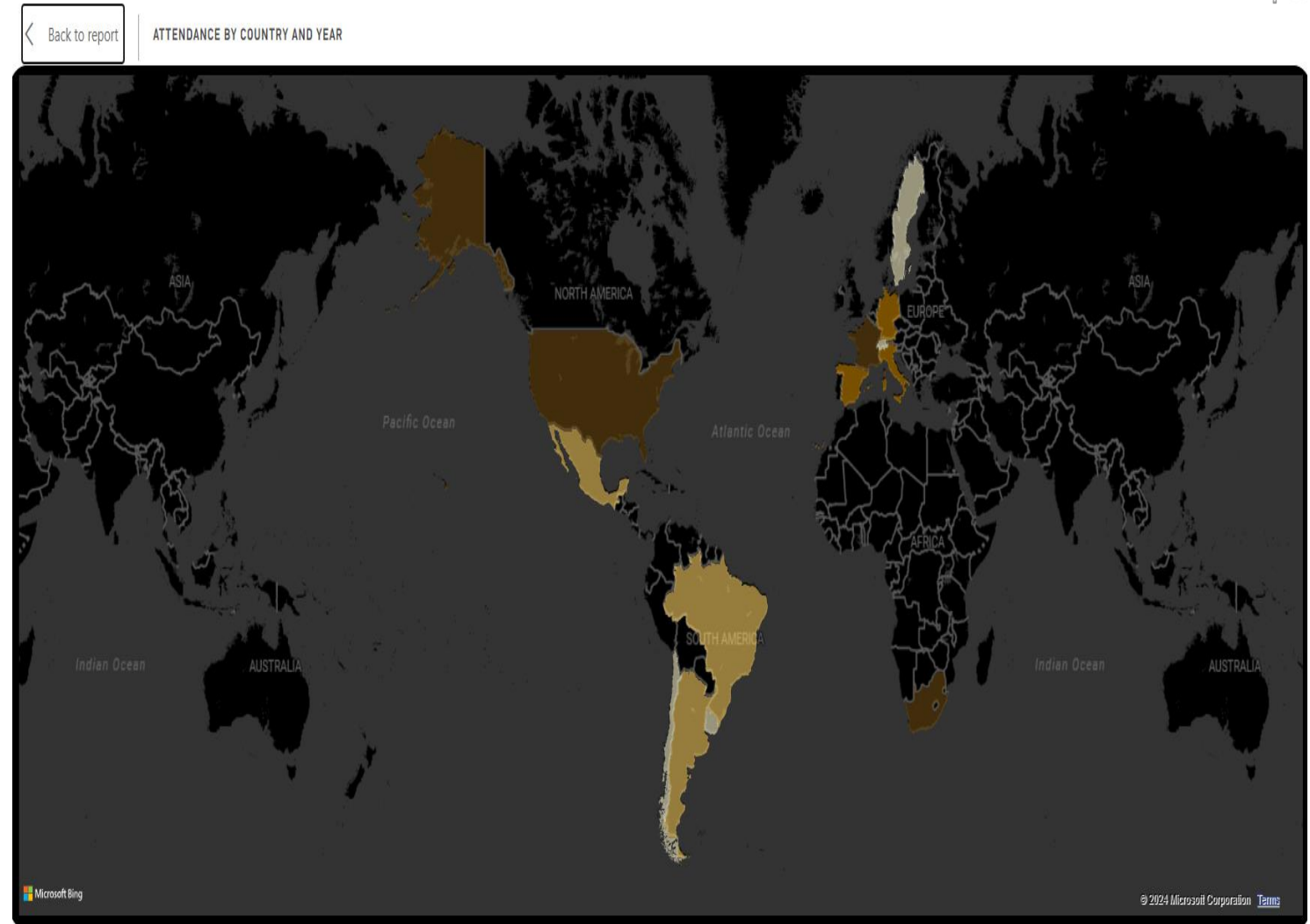
- With FIFA is in the blood of many people of the world. You are tasked to tell the story of unsung analysts who put great efforts to provide accurate data to answer every question of fans. The FIFA World Cup is a global football competition contested by the various football-playing nations of the world. It is contested every four years and is the most prestigious and important trophy in the sport of football. The World Cups dataset shows all information about all the World Cups in history, while the World Cup Matches dataset shows all the results from the matches contested as part of the cups. Find key metrics and factors that influence the World Cup win. Do your own research and come up with your findings.

# ARCHITECTURE

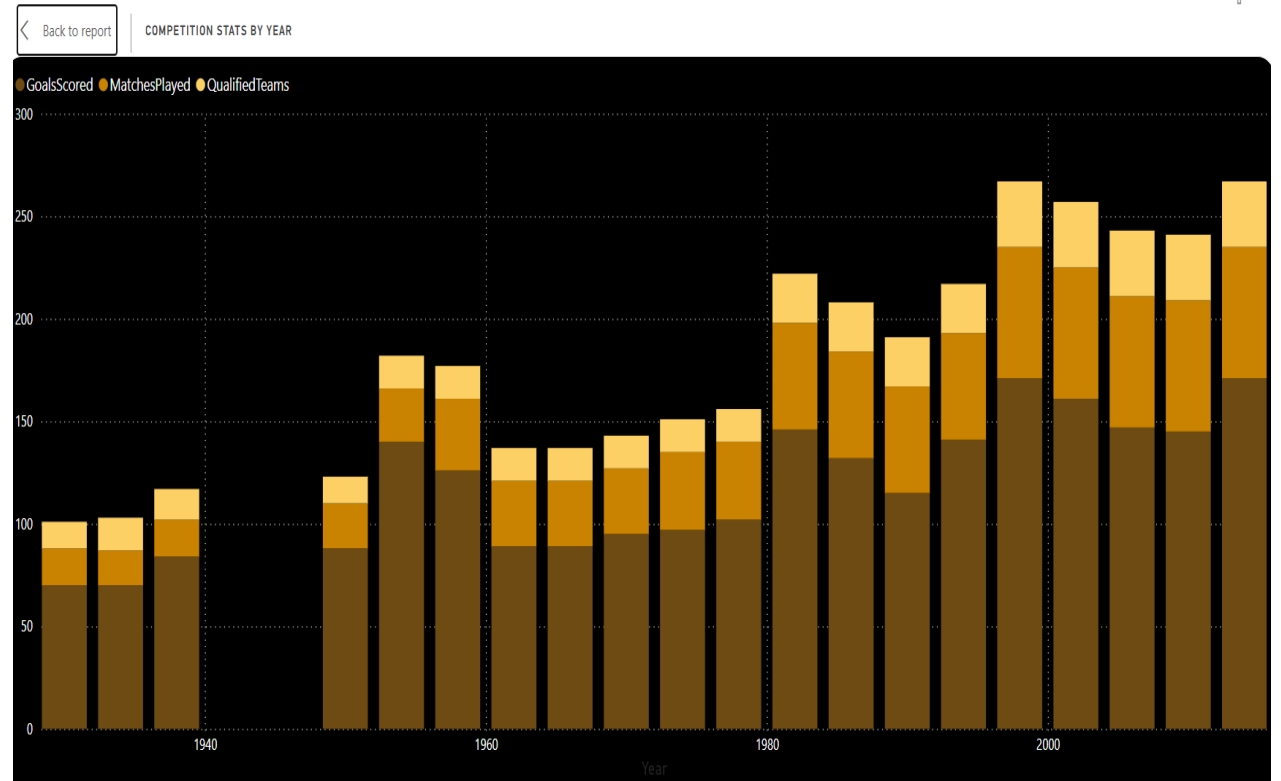
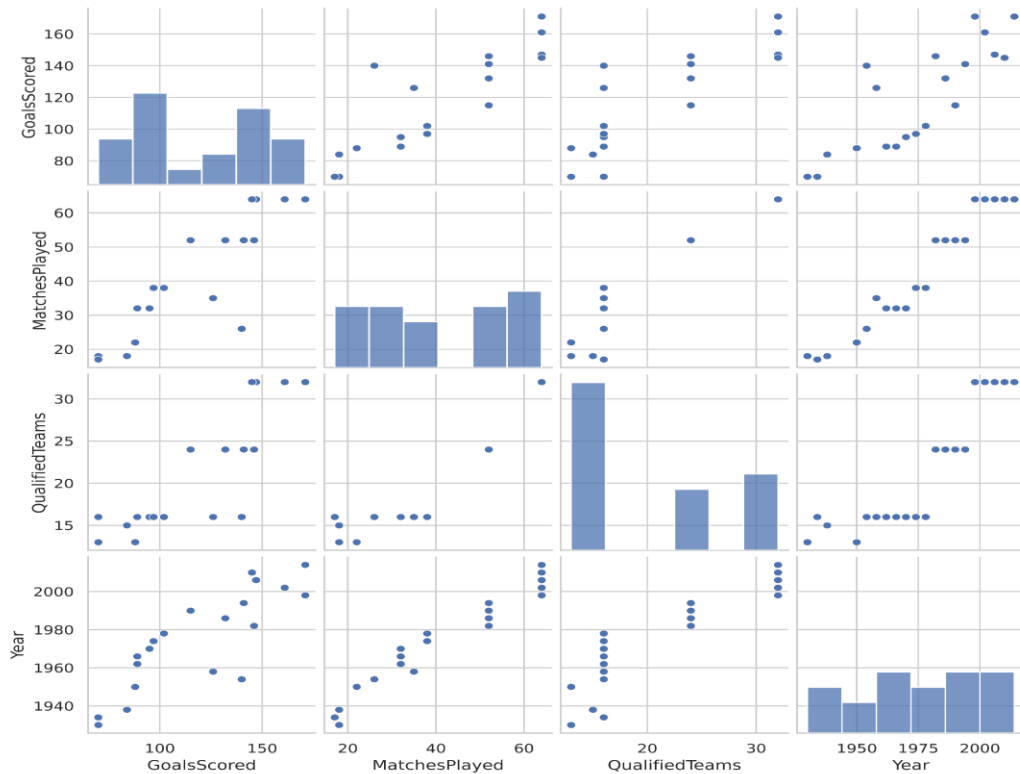


## NOTABLE OBSERVATIONS IN ATTENDANCE TRENDS

- **Highest Attendance:** The highest attendance figure in the data set is 3.587.538, which was recorded at the 1994 World Cup hosted in the United States.
- **Lowest Attendance:** The lowest attendance figure in the data set is 363, which was recorded at the 1934 World Cup hosted in Italy.
- **Consistent Attendance Growth:** The data suggests a consistent trend of increasing attendance figures over the years, with the exception of the 1938 World Cup in France, which saw a relatively low attendance of 375.7.



# COMPETITION STATISTICS



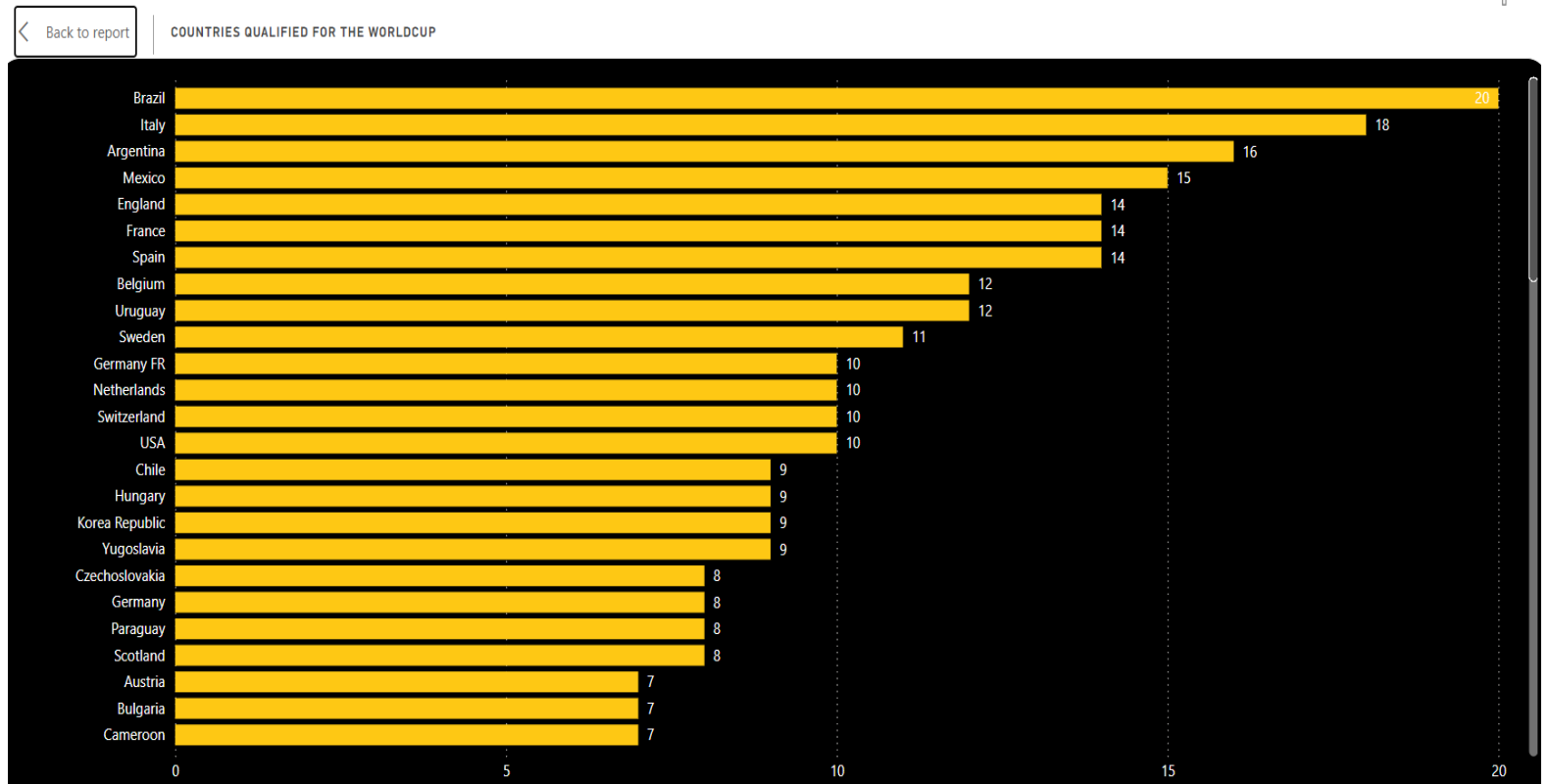
Here is a summary of the data:

- GoalsScored: The number of goals scored ranges from 70 to 171.
- MatchesPlayed: The number of matches played ranges from 17 to 64.
- QualifiedTeams: The number of qualified teams ranges from 13 to 32.
- Year: The dataset covers the years from 1930 to 2018.

# QUALIFYING SCENARIO

## Qualification statistics:

- The mean number of qualifications is approximately 5.14.
- The standard deviation is approximately 4.55, indicating variability in the number of qualifications among countries.
- The minimum number of qualifications is 1, and the maximum is 20.



# WINNERS

## Top Performers:

- Brazil leads with 5 World Cup wins.
- Italy and Germany FR follow with 4 and 3 wins respectively.
- Argentina and Uruguay each have 2 wins.

## Distribution:

- The distribution of wins is skewed, with a few countries dominating the World Cup history.
- The majority of countries have won the World Cup only once or twice.

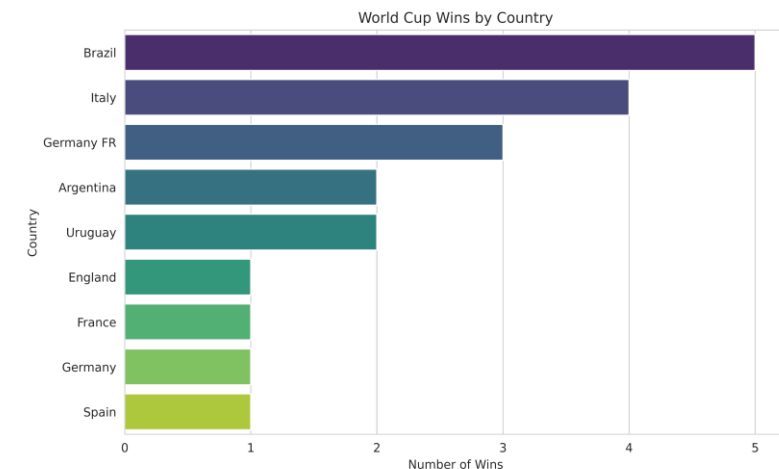
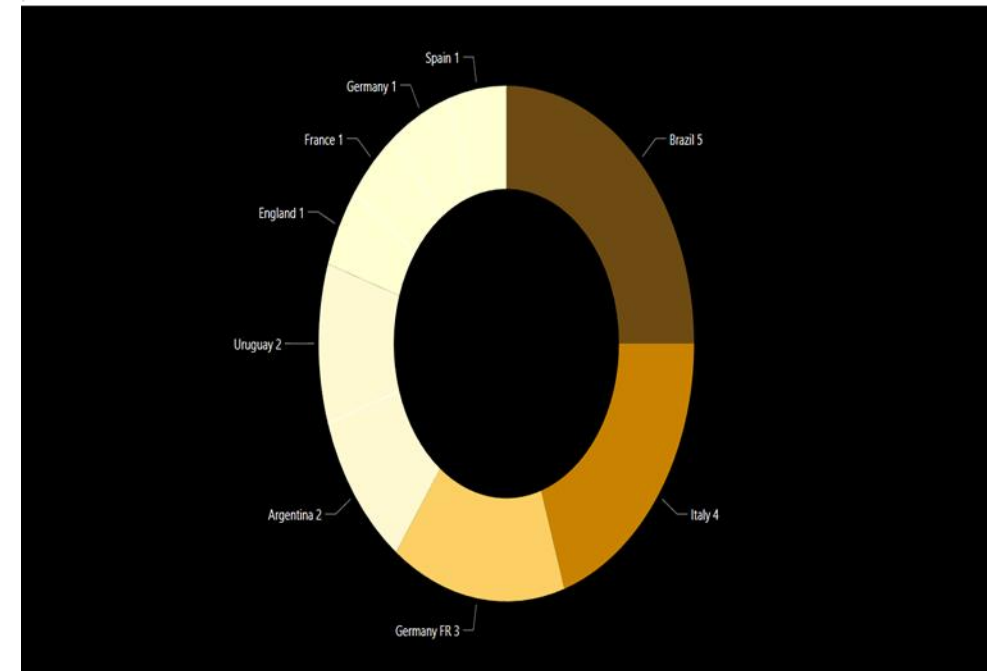
## Historical Dominance:

- Brazil's dominance in the World Cup is evident, being the only country with 5 wins.
- European countries like Italy and Germany FR have also shown strong performances historically.

## Visualization:

- The bar plot above visually represents the number of World Cup wins by each country. The countries are sorted in descending order of their wins, making it easy to identify the top performers.

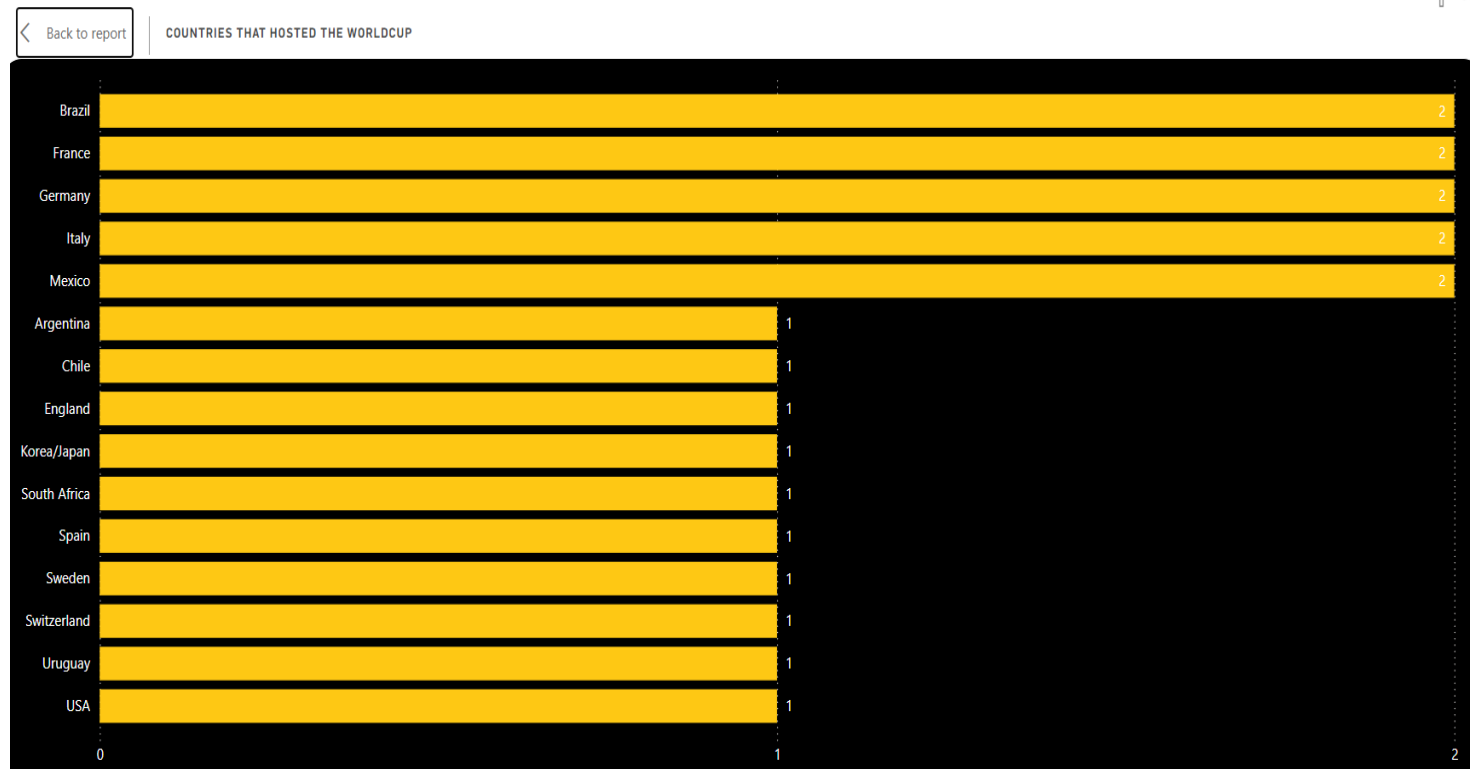
WORLD CUP WINNERS





# QUALIFYING SCENARIO

- Number of unique countries that have hosted the World Cup: 15
- Total number of times the World Cup has been hosted: 20
- Country that has hosted the World Cup the most times: Brazil (2 times)
- Countries that have hosted the World Cup more than once:
  - Brazil: 2 times
  - France: 2 times
  - Germany: 2 times
  - Italy: 2 times
  - Mexico: 2 times



## EXECUTIVE SUMMARY

- Attendance: The analysis of the World Cup attendance data reveals a consistent trend of increasing global interest and popularity of the event. The host country's football culture and infrastructure appear to play a significant role in the attendance figures, and various other factors may also contribute to the observed patterns.
- Host: Brazil, France, Germany, Italy and Mexico each have hosted the World Cup twice. Argentina, Chile, England, Korea/Japan, South Africa, Spain, Sweden, Switzerland, Uruguay, USA have all hosted the FIFA World Cup once.
- Statistics: The number of goals scored, matches played, and qualified teams have all increased over time, indicating the expansion and increased competitiveness of the event.
- Success: The data reveals a clear hierarchy in terms of World Cup qualifications, with a few teams consistently dominating the tournament. Brazil, Italy, and Argentina are the top performers, while many other teams have had sporadic success.

## DETAILED FINDINGS

- HOST

- -Number of unique countries that have hosted the World Cup: 15.
- Total number of times the World Cup has been hosted: 20.
- Country that has hosted the World Cup the most times: Brazil (2 times).

- ATTENDANCE

- Increasing Global Interest: The overall trend in the data suggests a growing global interest and popularity of the World Cup over the years. The attendance figures have consistently increased, with some countries like Brazil, Germany, Italy, and Mexico showing significant jumps in attendance between their hosting years.
- Influence of Host Country: The host country appears to play a significant role in the attendance figures. Countries with a strong football culture and infrastructure, such as Brazil, Germany, and Italy, tend to have higher attendance figures compared to countries with a relatively smaller football fan base, such as Switzerland and Uruguay.

# DETAILED FINDINGS

## COMPETITION STATS

- GoalsScored vs. MatchesPlayed: There is a positive correlation between the number of goals scored and the number of matches played. As the number of matches increases, the number of goals scored also tends to increase.
- GoalsScored vs. QualifiedTeams: There is a slight positive correlation between the number of goals scored and the number of qualified teams. More teams in the competition tend to result in more goals being scored.
- MatchesPlayed vs. QualifiedTeams: There is a positive correlation between the number of matches played and the number of qualified teams. More teams in the competition lead to more matches being played.
- Year vs. Other Variables: Over the years, there has been an increase in the number of goals scored, matches played, and qualified teams. This indicates the growth of the competition over time.

## QUALIFICATION SCENARIOS

- *Brazil* with 20 appearances, *Italy* with 18 appearances, *Argentina* with 16 appearances, *Mexico* with 15 appearances, *England*, *France*, and *Spain* with 14 appearances each. These teams have consistently qualified for the World Cup over the years, showcasing their dominance and success in the international football arena.

# CONCLUSION

- Brazil, Italy, and Germany FR have been particularly successful, with Brazil leading the pack.
- The data reveals a clear hierarchy in terms of World Cup qualifications, with a few teams consistently dominating the tournament. Brazil, Italy, and Argentina are the top performers, while many other teams have had sporadic success.
- The number of goals scored, matches played, and qualified teams have all increased over time, indicating the expansion and increased competitiveness of the event.
- The analysis of the World Cup attendance data reveals a consistent trend of increasing global interest and popularity of the event. The host country's football culture and infrastructure appear to play a significant role in the attendance figures, and various other factors may also contribute to the observed patterns.
- Successful Match Outcomes by Home Team are high(57%). In summary, a 57% win rate for home teams indicates a clear home advantage, which has implications for team strategy, fan expectations, and predictive modeling.