

# Unveiling the Career Dynamics of a Football Icon

- ▶ **“Decoding Cristiano Ronaldo's Career Trajectory : A Comprehensive Analysis of the Football Legend's Performance”**
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  - ▶ Date – 10-05-24

# Agenda:

- ▶ - Introduction to the Football Player
- ▶ - Overview of Datasets
- ▶ - Exploratory Data Analysis (EDA)
- ▶ - Performance Analysis
- ▶ - Conclusion

# Introduction:

- ▶ **Cristiano Ronaldo**, often regarded as one of the greatest football players of all time, was born on February 5, 1985, in Funchal, Madeira, Portugal. Known for his remarkable athleticism, skill, and dedication, Ronaldo has enjoyed an illustrious career spanning multiple prestigious clubs and international competitions. With an impressive goal-scoring record and numerous accolades, including multiple FIFA Ballon d'Or awards, Ronaldo's impact on the world of football is unparalleled. His relentless pursuit of excellence both on and off the pitch has cemented his legacy as an iconic figure in the sport.
- ▶ The analysis approach will involve a thorough examination of Cristiano Ronaldo's career using three key datasets: goal\_scorer, result, and shootouts. By delving into these datasets, we aim to uncover insights into Ronaldo's performance over time, his impact on match outcomes, and his proficiency in critical moments such as shootouts. Through exploratory data analysis (EDA), we will visualize trends, patterns, and milestones in Ronaldo's career, providing a comprehensive understanding of his journey as a football icon.

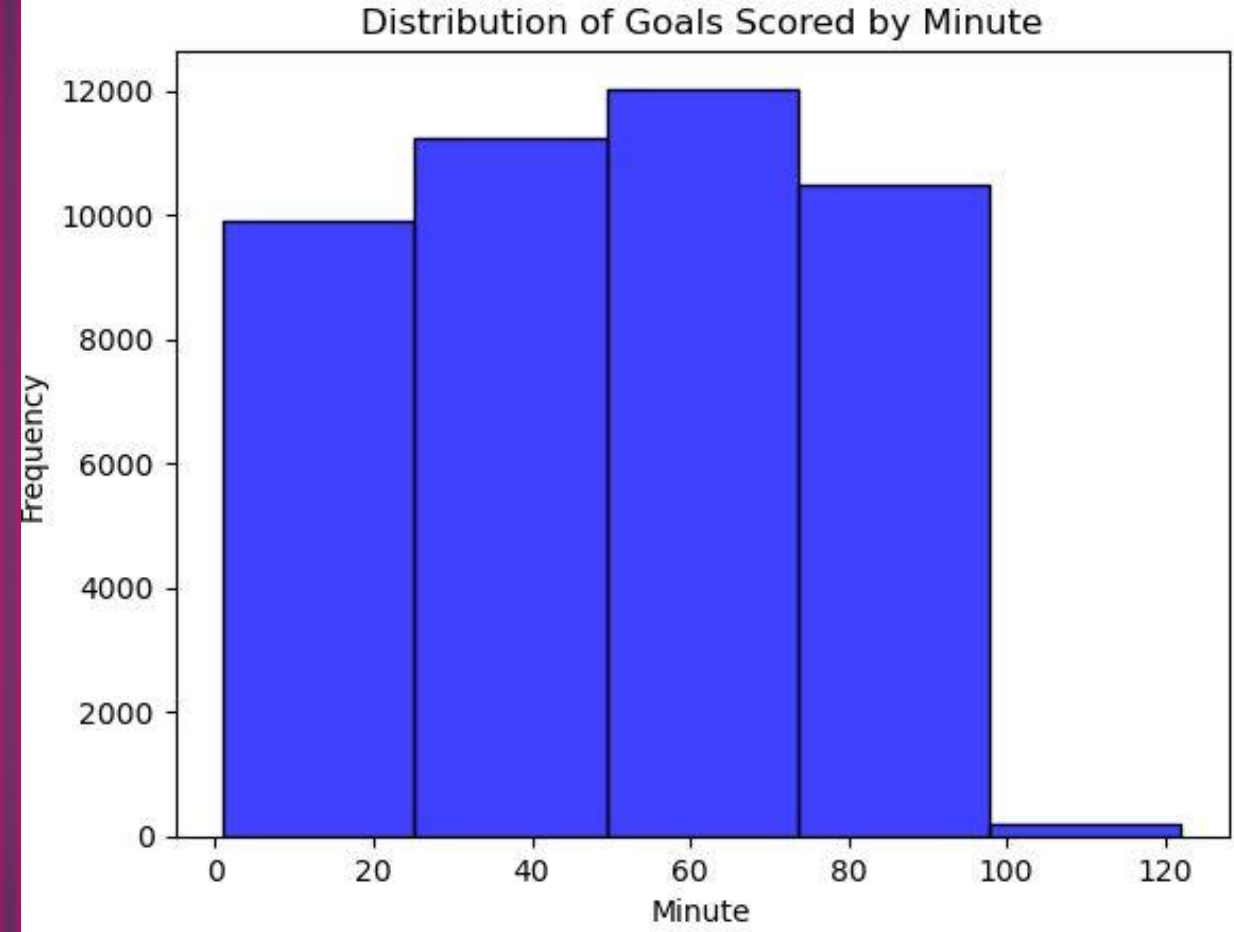
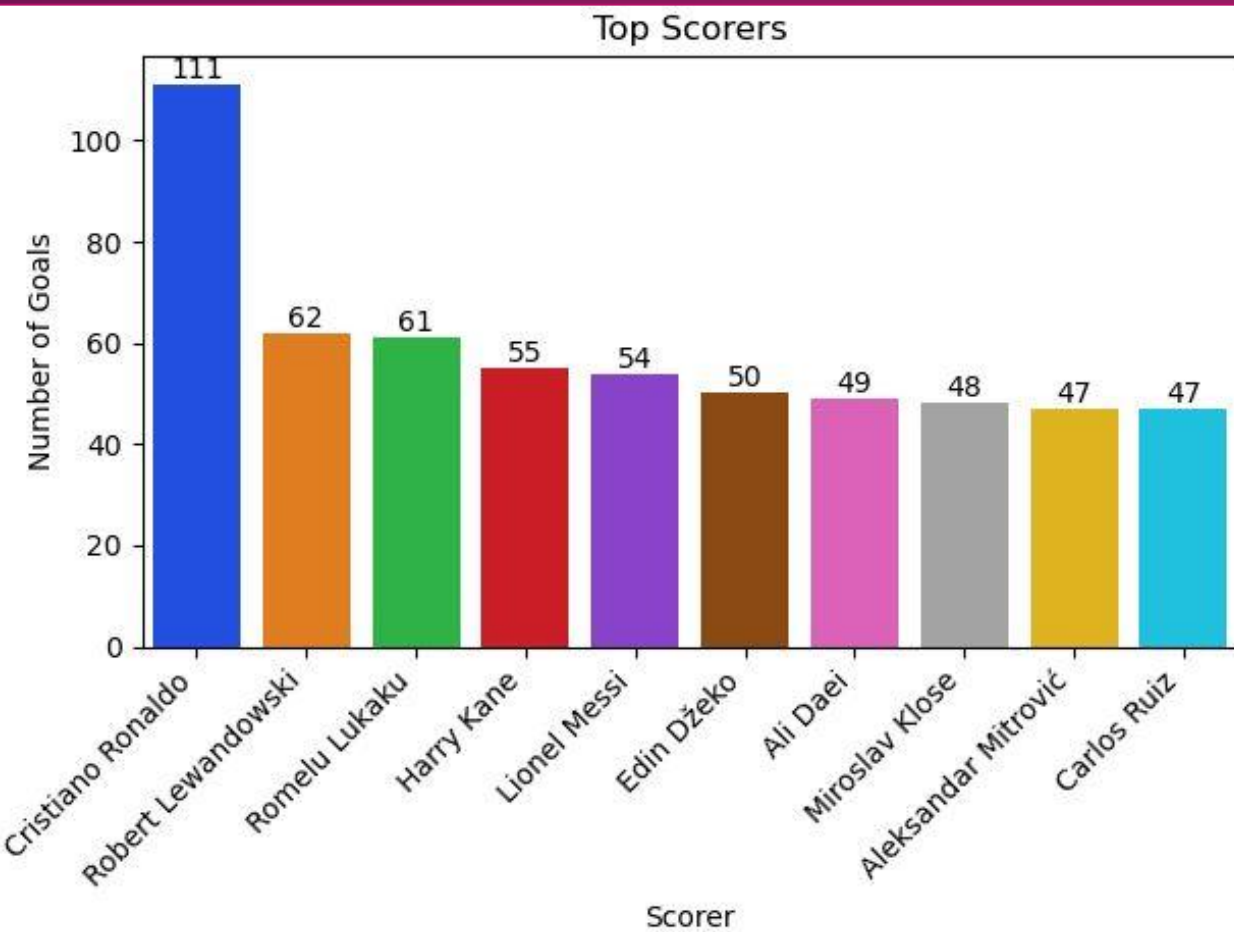
# Dataset Overview:

- ▶ - Description of each Dataset (goal\_scorer, result, shootouts)
  - ▶ goal\_scorer dataset has 44110 Rows and 8 Columns
  - ▶ results dataset has 46442 Rows and 9 Columns
  - ▶ shootouts dataset has 605 Rows and 4 Columns
- ▶ - Explanation of Relevant Fields/Columns
  - ▶ The goal\_scorer dataset consists of 8 columns, predominantly categorical, with the "minute" column being the sole numerical attribute.
  - ▶ In the result dataset, there are nine columns, featuring "home\_score" and "away\_score" as numerical attributes, "neutral" as a boolean attribute, while the remaining columns are categorical.
  - ▶ In the shootout dataset, all five columns consist of categorical data.

# Exploratory Data Analysis (EDA):

- ▶ - Visualizations of Goal Scorer Data
- ▶ - Perform Analysis of Cristiano Ronaldo
  - ▶ - Goals in Tournament
  - ▶ - Goals by Match Venue (Home/Away)
  - ▶ - Visualizations of Result Distribution
  - ▶ - Type of Goals
  - ▶ - Goals Against Opponent
  - ▶ - Goals Per Year
  - ▶ - Goals in Cities and Country]
  - ▶ - Goals in Different Time band
- ▶ Result Analysis By Different Components

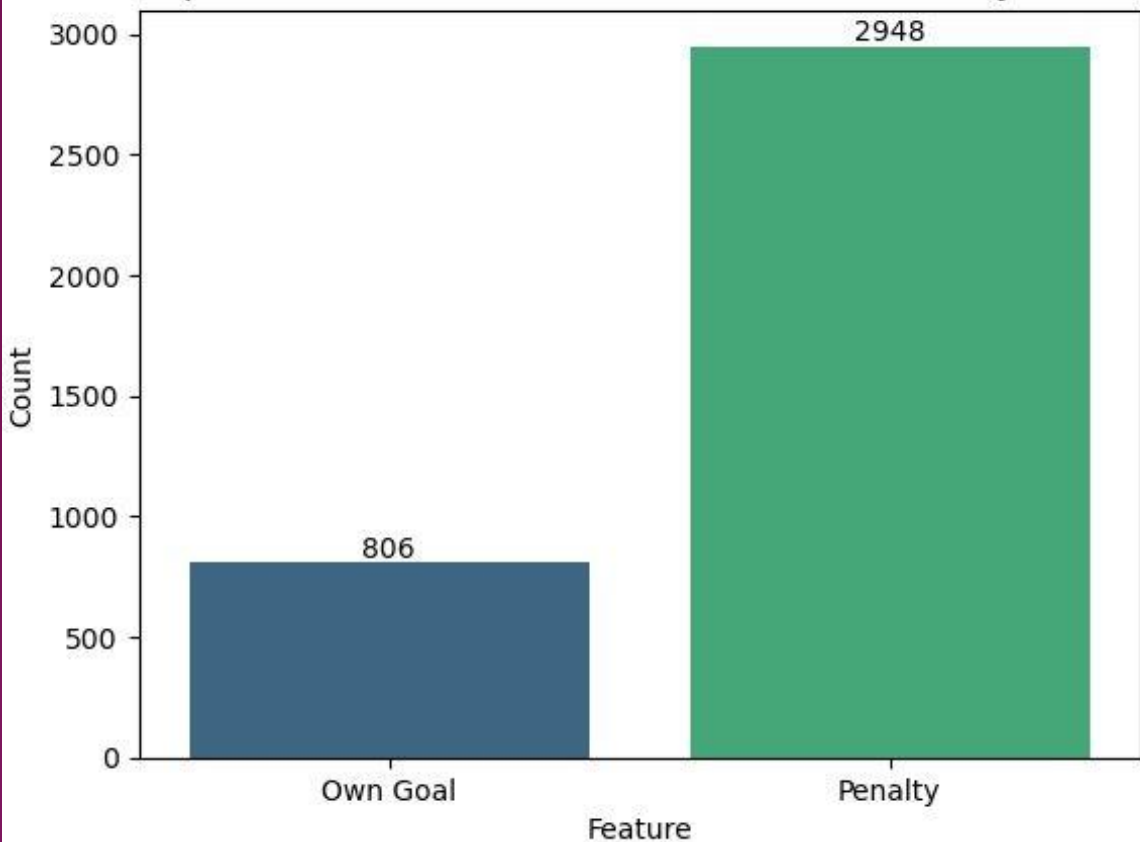
# Visualization of Goal Scorer Data and Explore some interesting Factors:



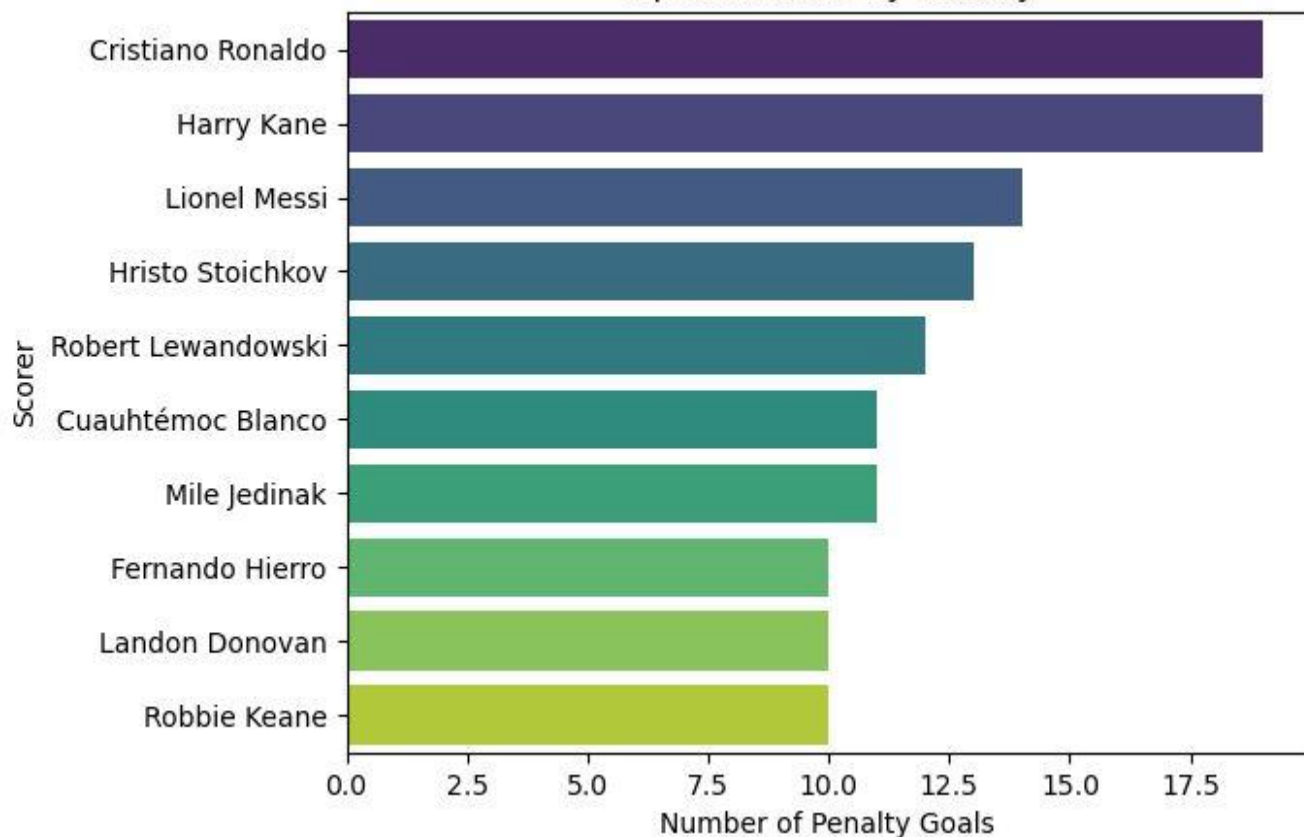
- Cristiano Ronaldo has scored 111 goals for his country, making him the highest goal scorer among all other players
- The maximum number of goals are scored by players in the 50 to 70-minute time band.



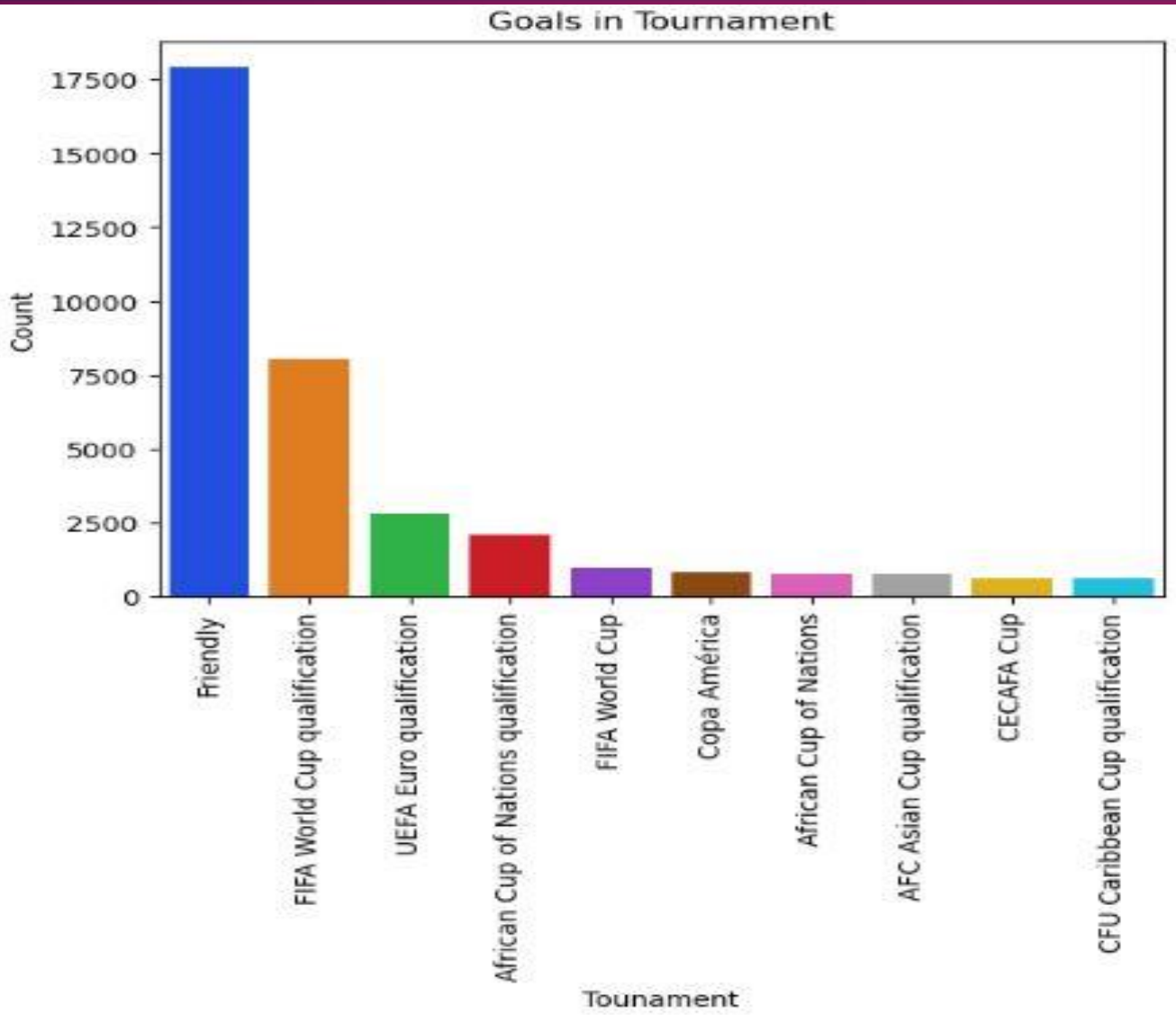
Comparison of "True" Counts in Own Goal and Penalty Columns



Top 10 Scorers by Penalty



- Scorers have netted 2948 goals from penalties, which isn't surprising since they often convert such opportunities. However, it's unexpected that they've also conceded 806 own goals, indicating a significant number of mistakes on their part.
- Cristiano Ronaldo and Harry Kane are the top two players who convert their maximum goals by penalty



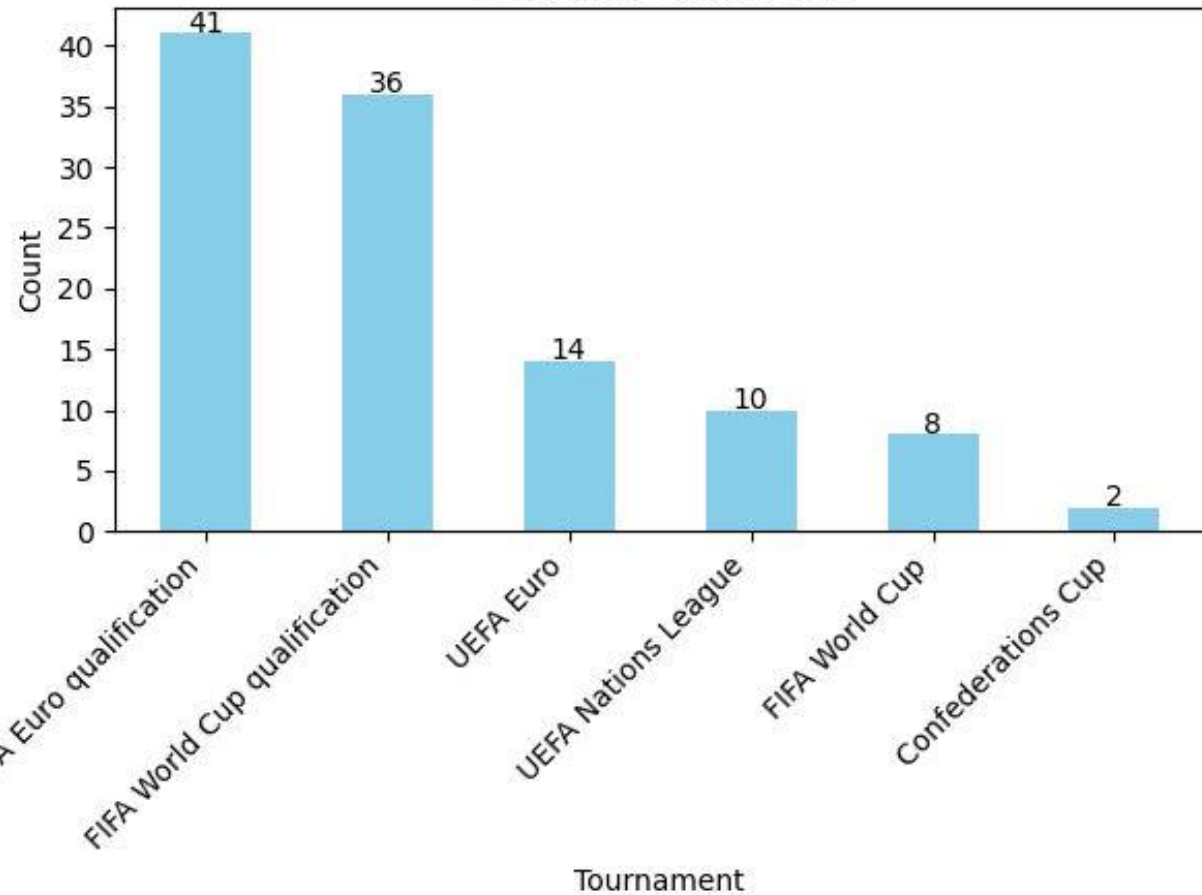
- Here is Top ten Tournament where Players scored goals maximum
- In friendly matches, players scored the most goals for their country.
- When analyzing by competition, the FIFA World Cup Qualification Round witnessed the highest number of goals scored.



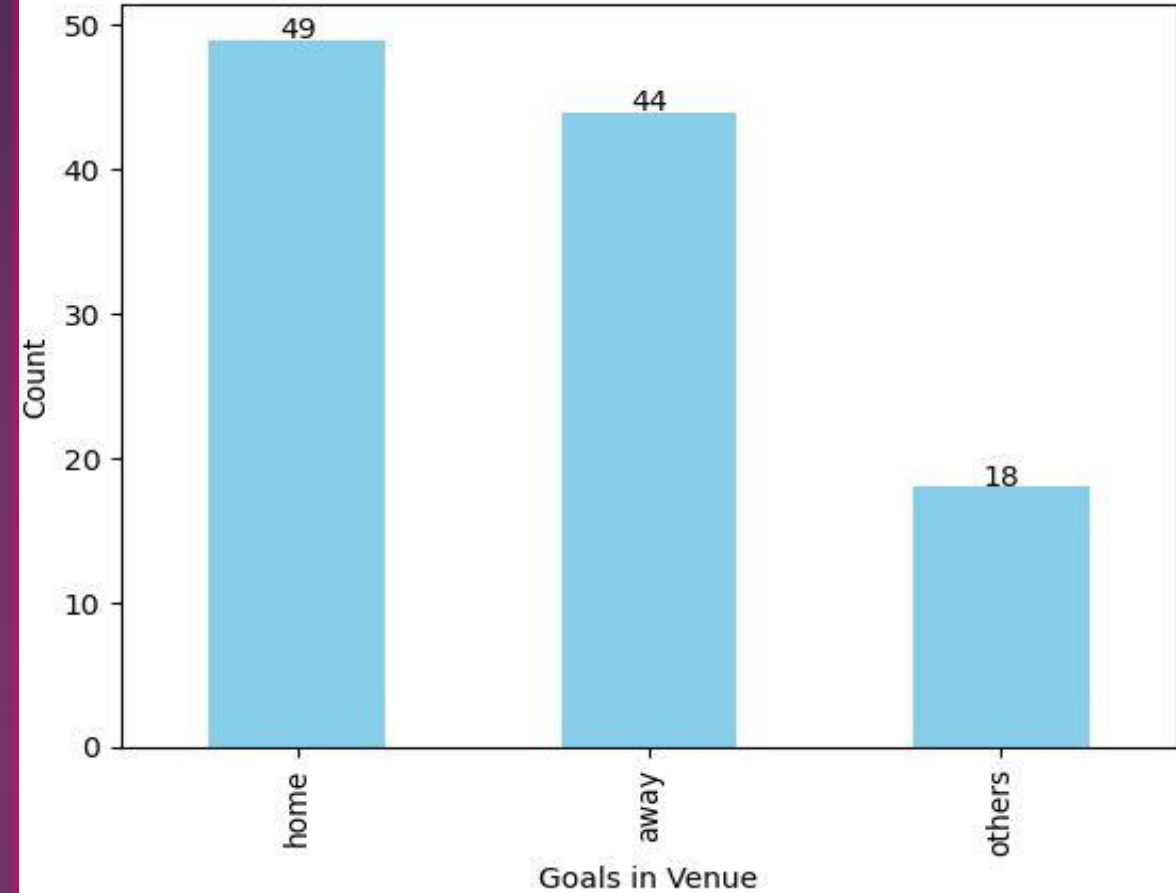
# Perform Analysis of Cristiano Ronaldo



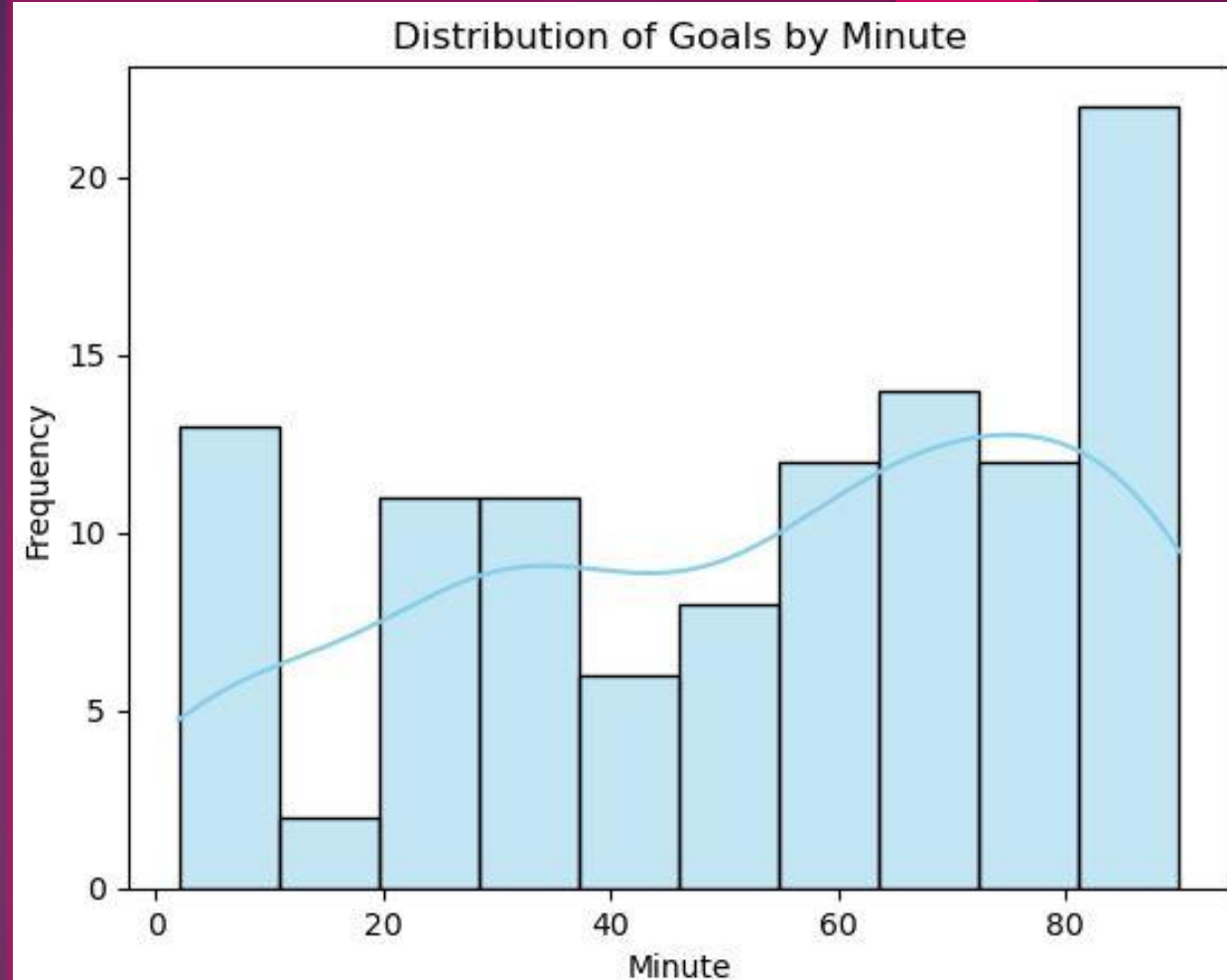
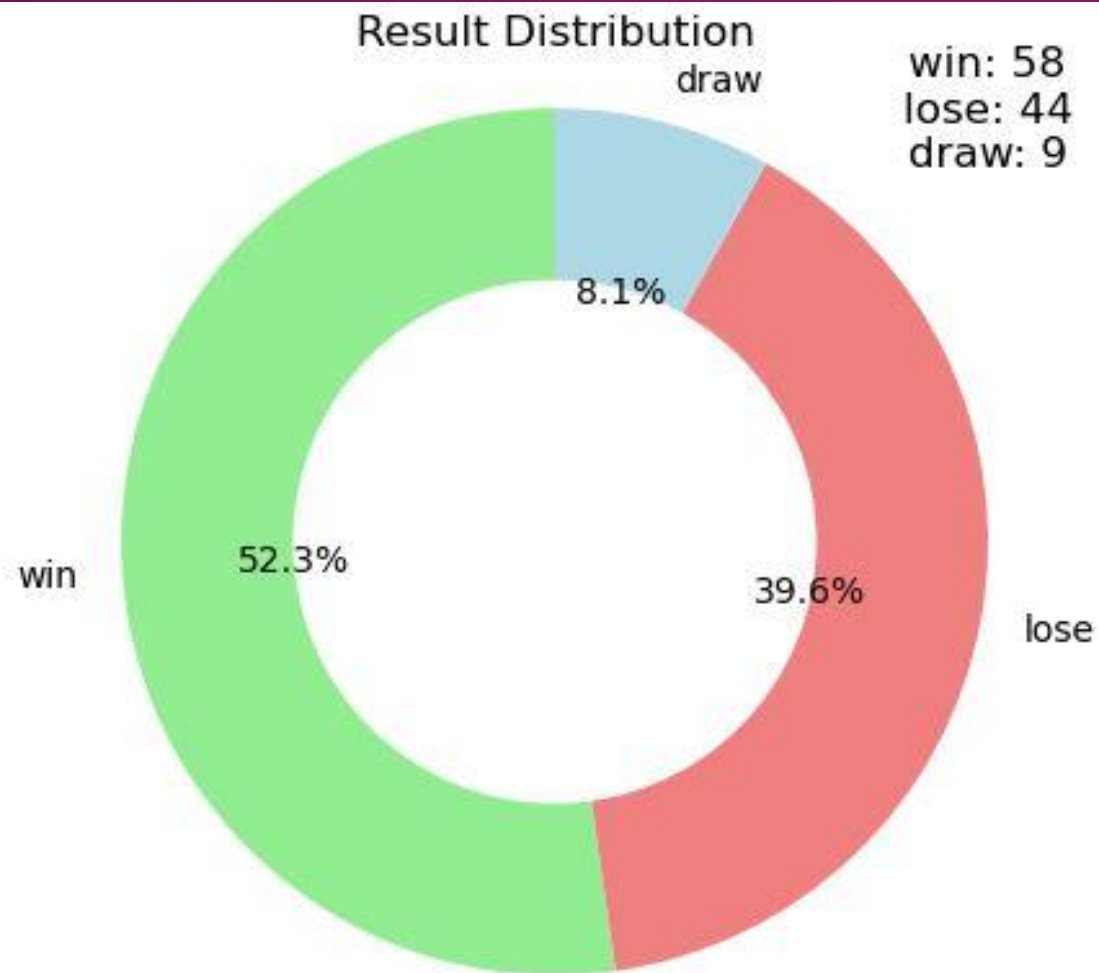
Goals in Tournaments



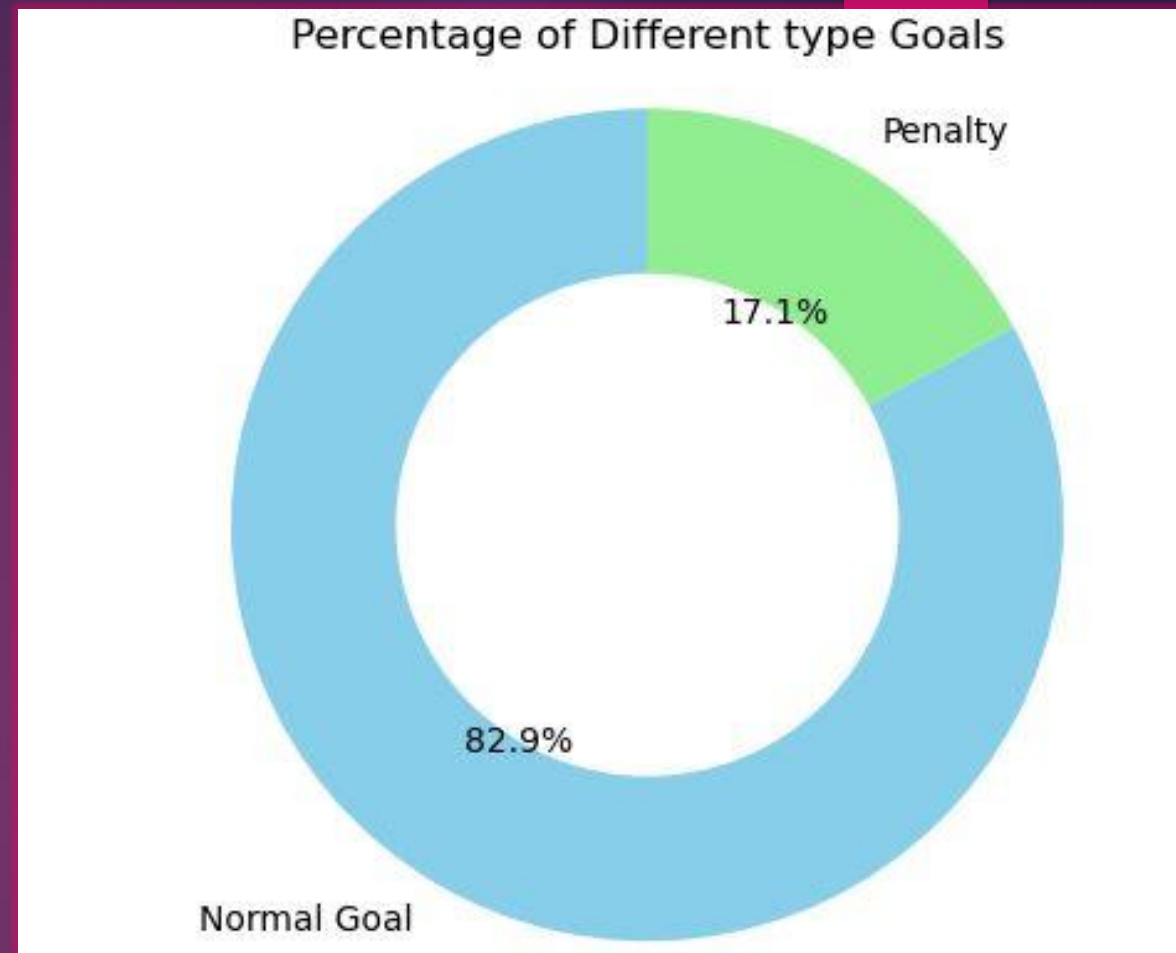
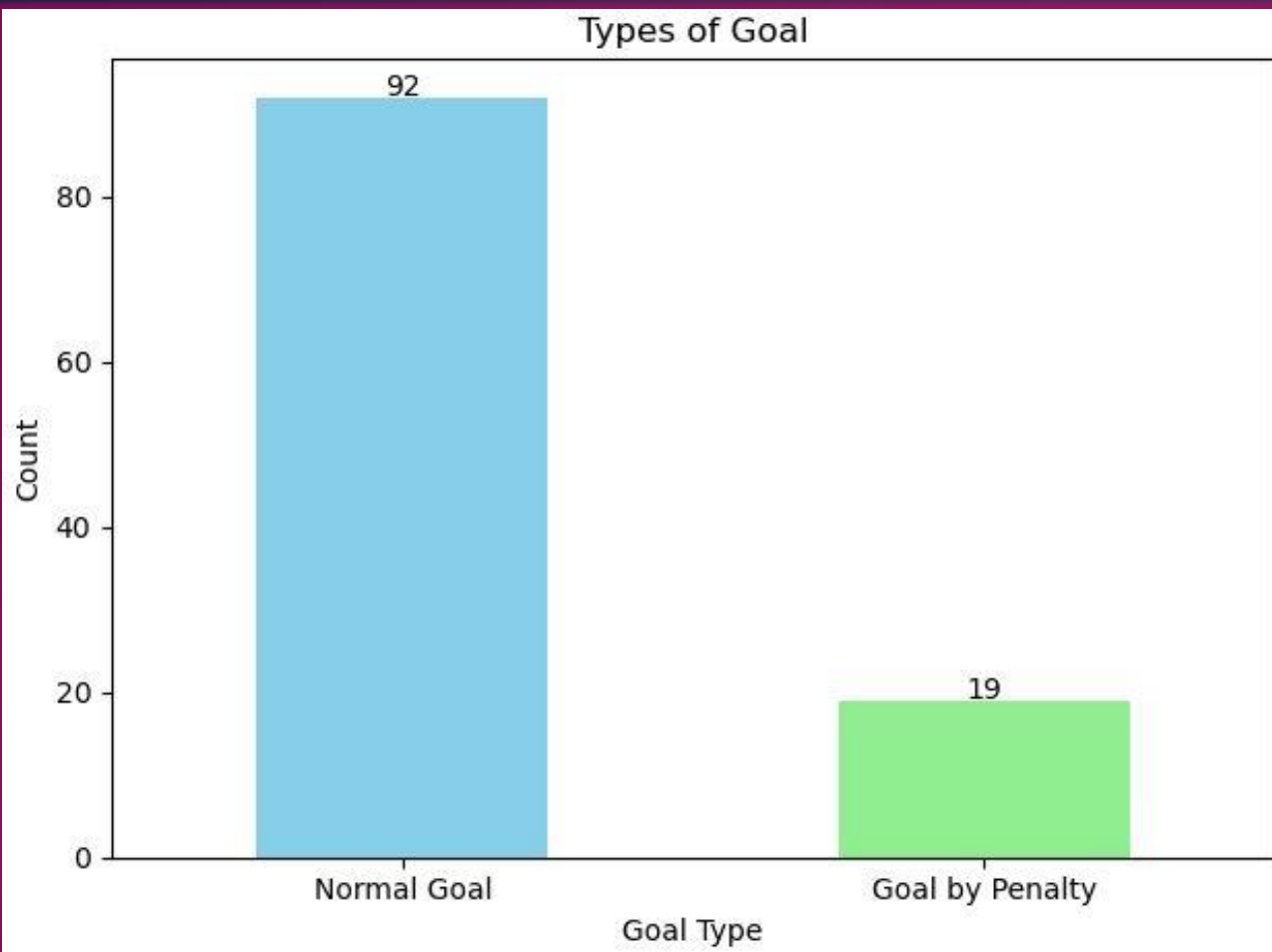
Venue Distribution



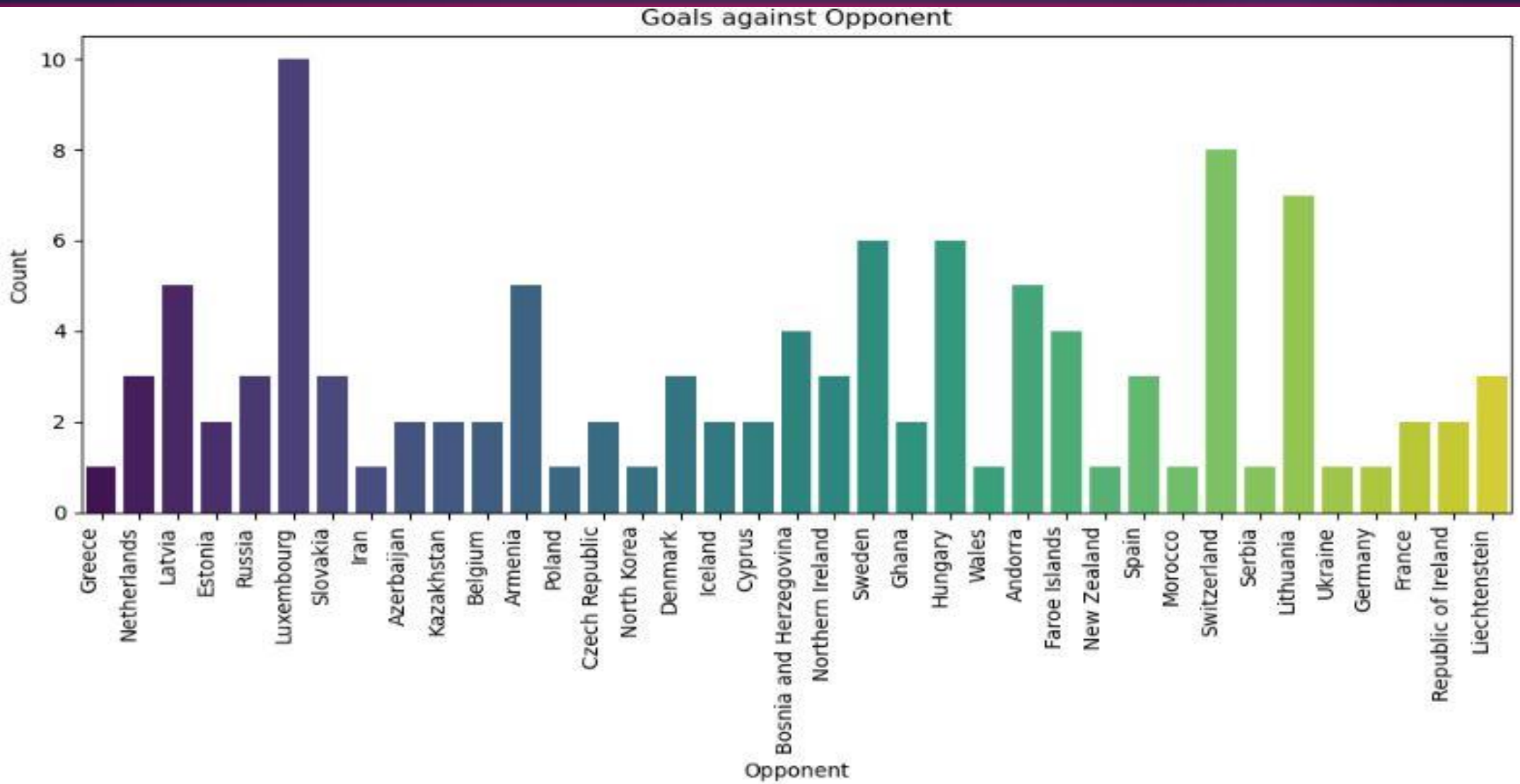
- Cristiano Ronaldo scored 41 goals in the UEFA Euro Qualification round and 36 goals in the FIFA Qualification round. This means he scored the most goals in the UEFA Euro Qualification.
- Cristiano Scored maximum number of Goals(49 Goals) in Home Matches



- Winning percentage of Portugal (in which Cristiano Ronaldo Played) is 52.3%
- Cristiano scored more than 20 goals out of 111 after the 80th minute. Interestingly, he scored more than 10 goals out of 111 at the very beginning. Rest of goals are scored in 20 -70 min time band



➤ Cristiano Scored goals by penalty 19 times(17.1%) when he played for his country.



Cristiano Scored Maximum Number of Goals against

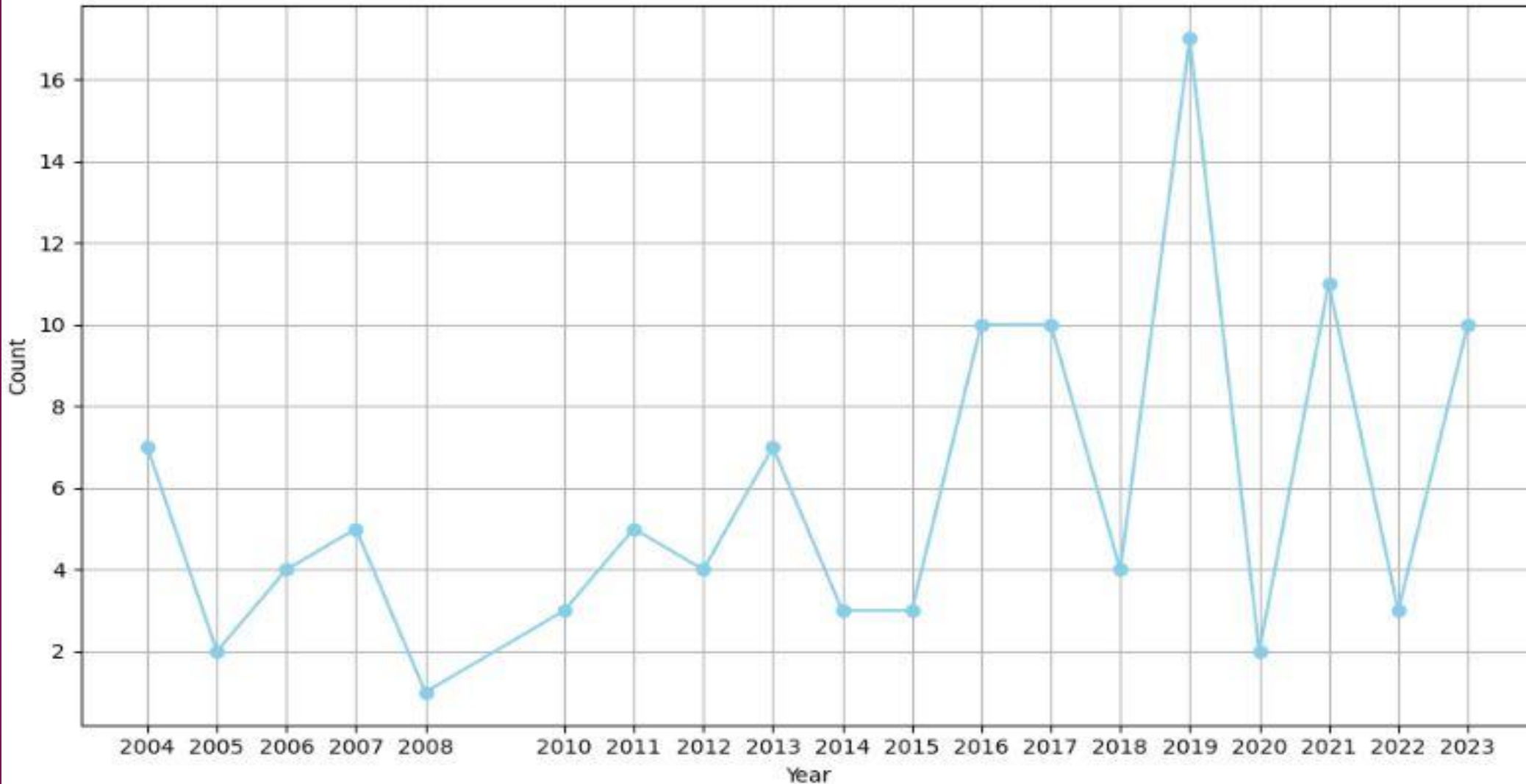
- 1.Luxembourg
- 2.Switzerland
- 3. Lithuania

Cristiano scored the minimum number of goals against:

- |               |               |           |           |
|---------------|---------------|-----------|-----------|
| - Greece      | - North Korea | - Morocco | - Ukraine |
| - Iran        | - Wales       | - Serbia  | - Poland  |
| - New Zealand | - Germany     |           |           |



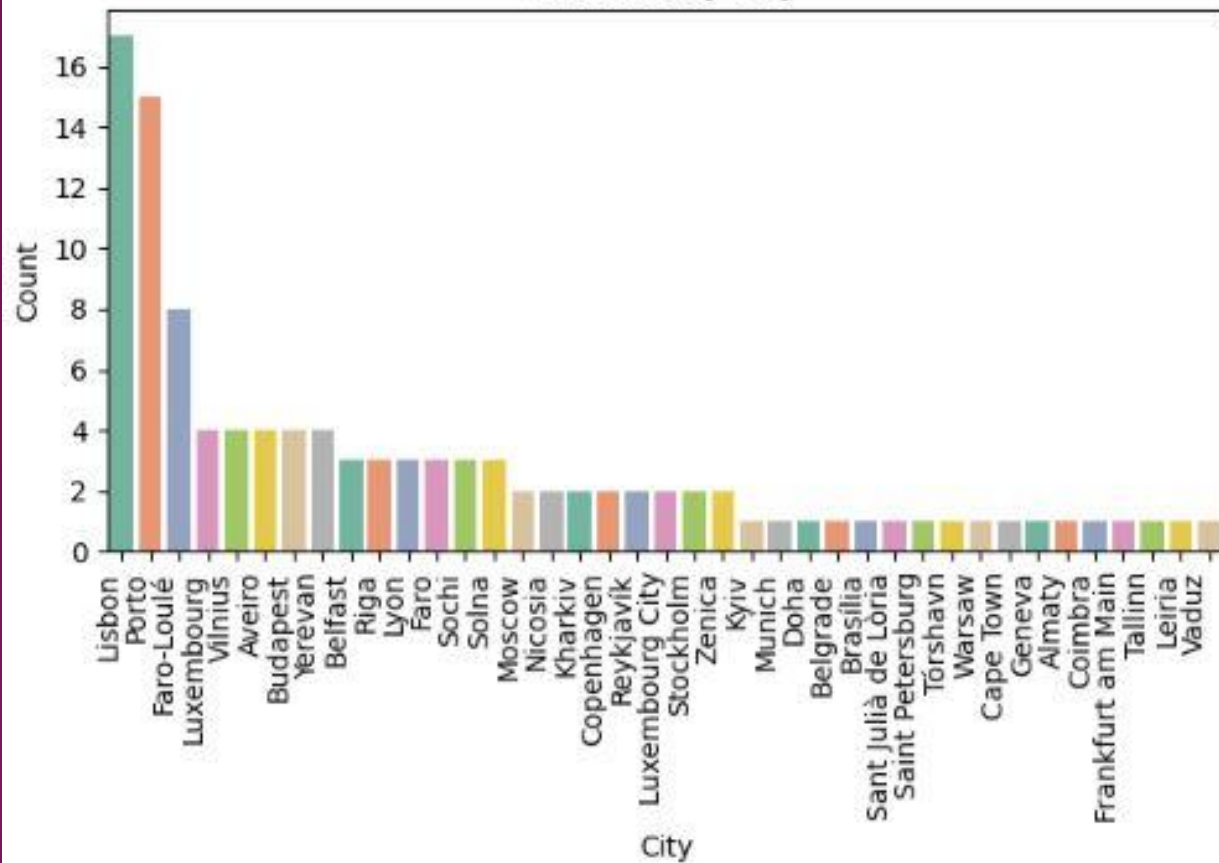
Goals per Year



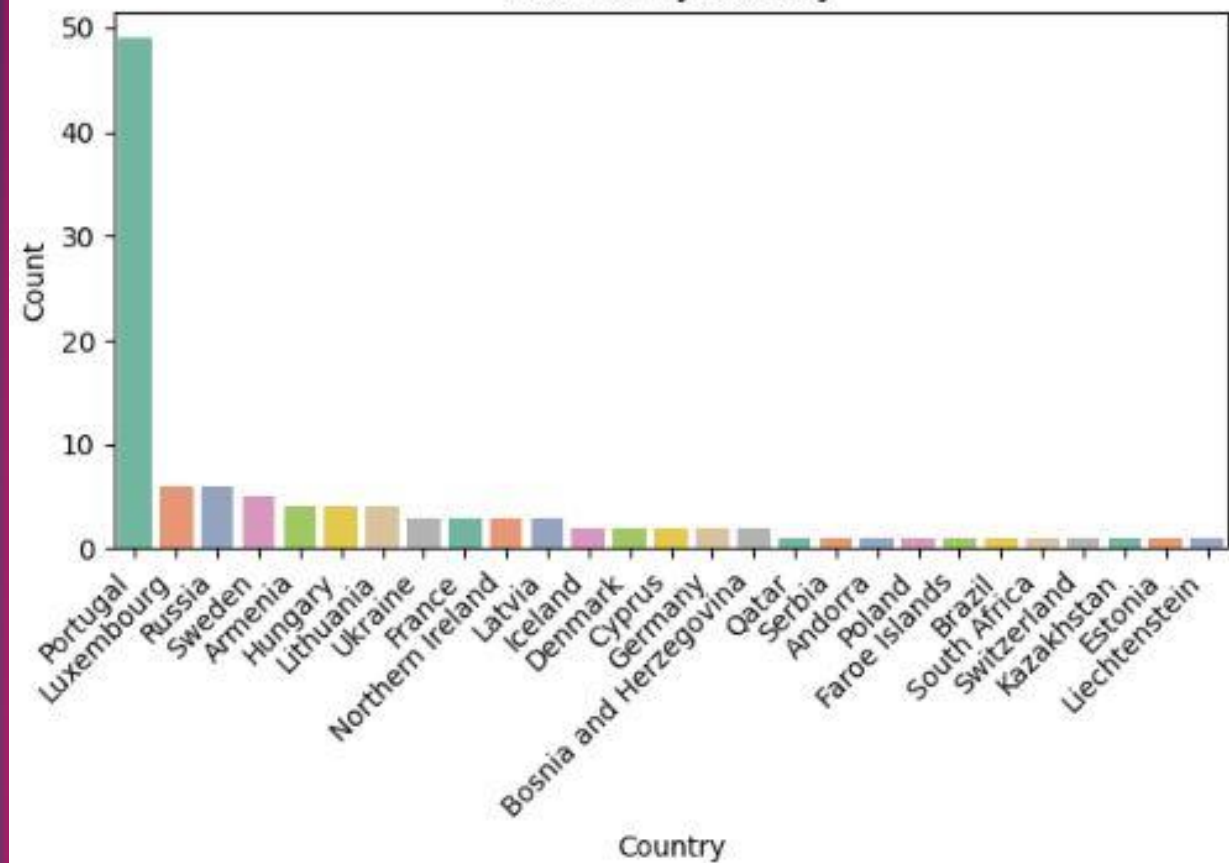
- This dataset contains 19 years of data.
- Cristiano scored the maximum number of goals for his country in the year 2019.
- He scored the minimum number of goals in the year 2008.
- Interestingly, Cristiano Ronaldo scored fewer goals in FIFA World Cup years, like 2022, 2018, 2014, 2010.



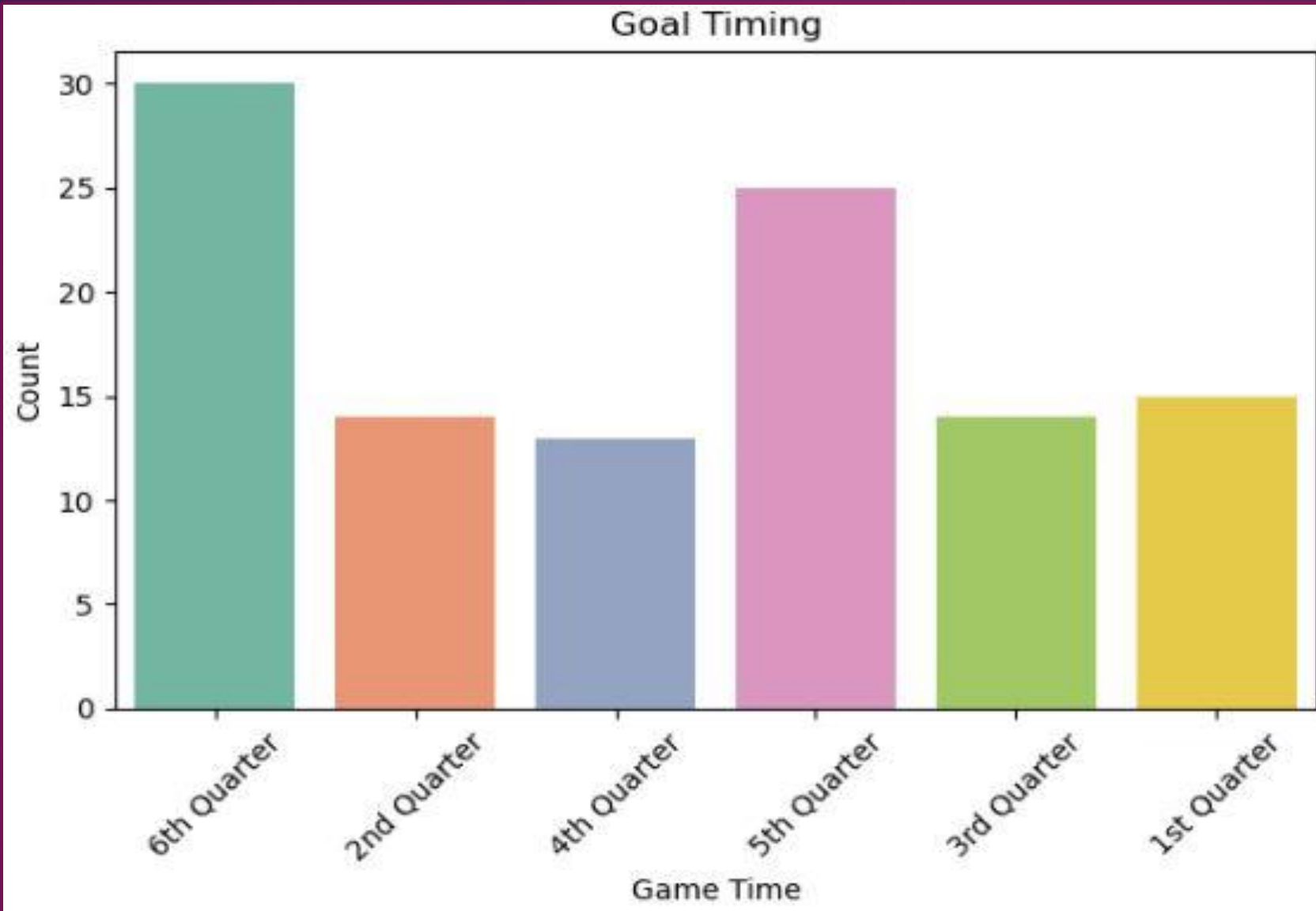
Matches by City



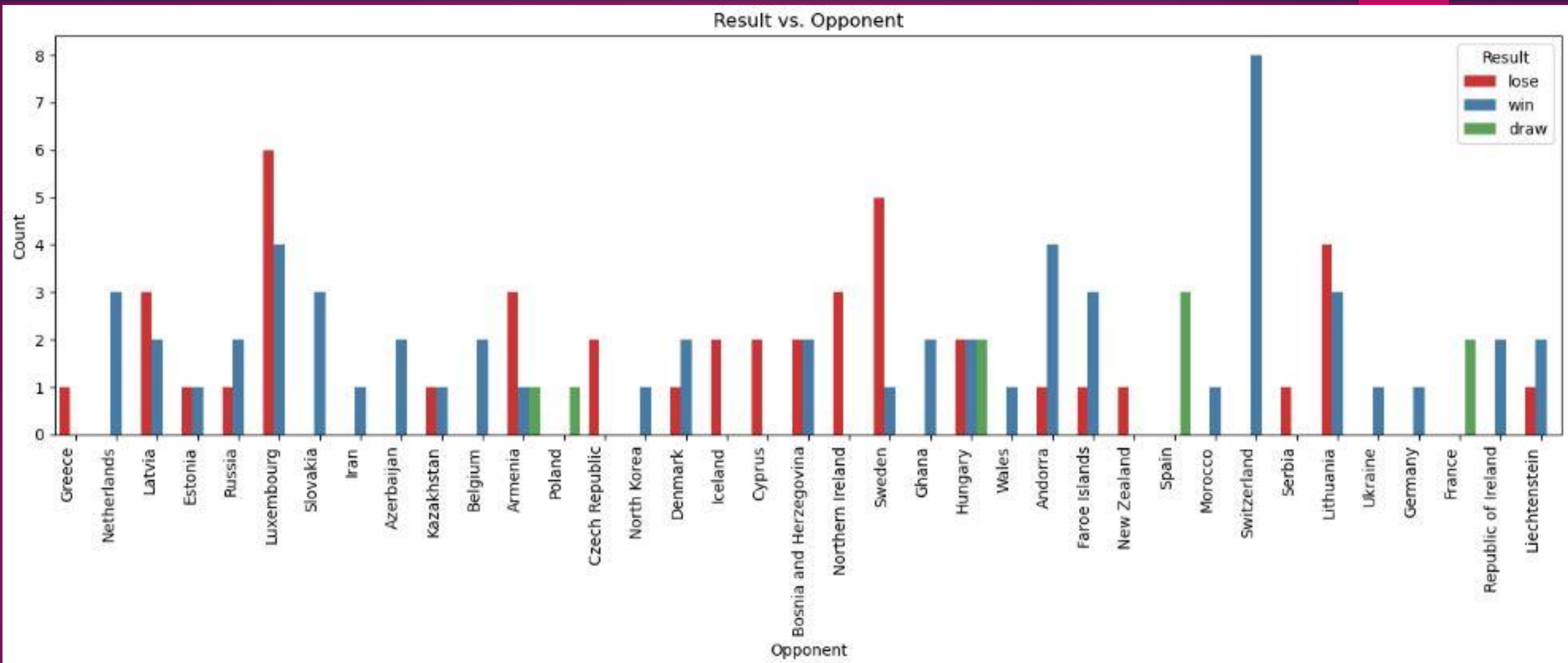
Matches by Country



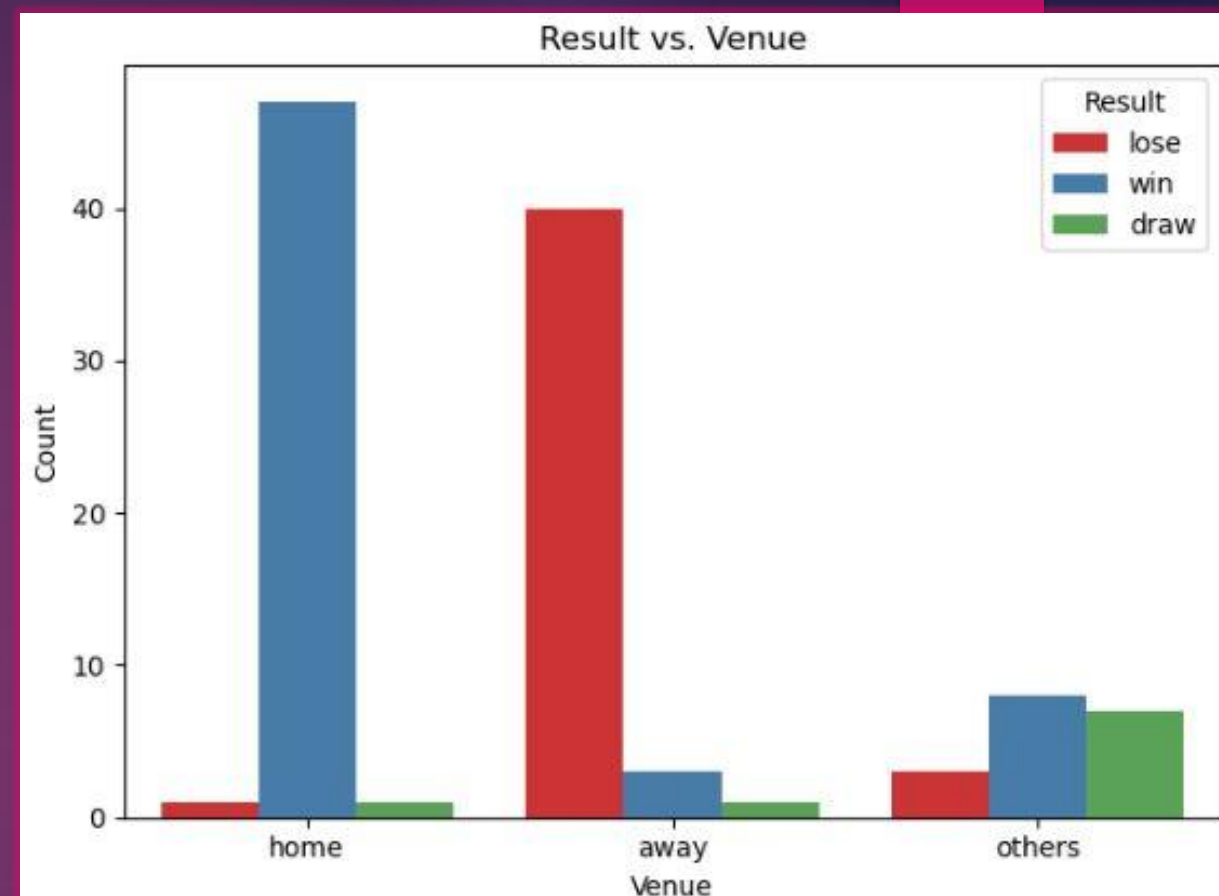
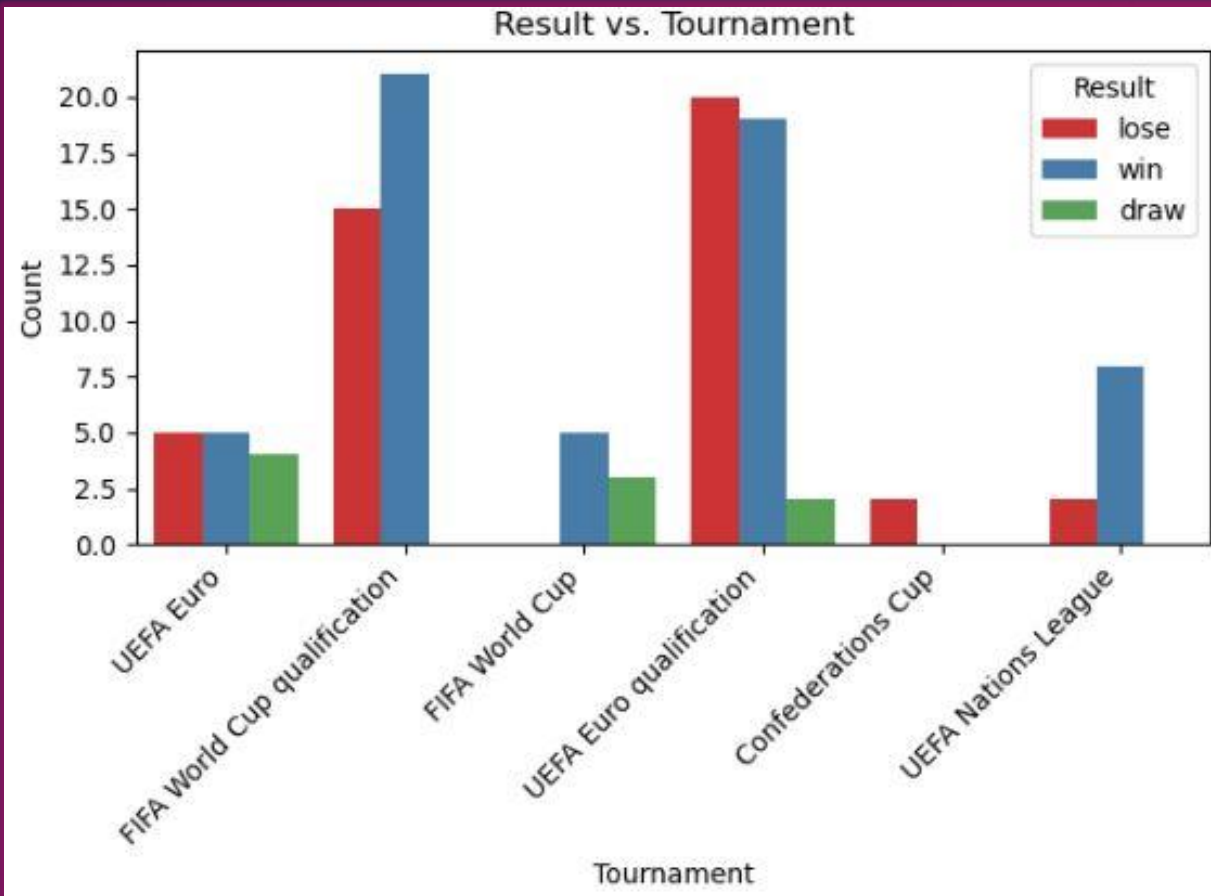
➤ Cristiano Scored maximum number of goals in Lisbon and Porto city in Portugal



Cristiano Scored maximum goals in 6th and 5th Quarter of the game

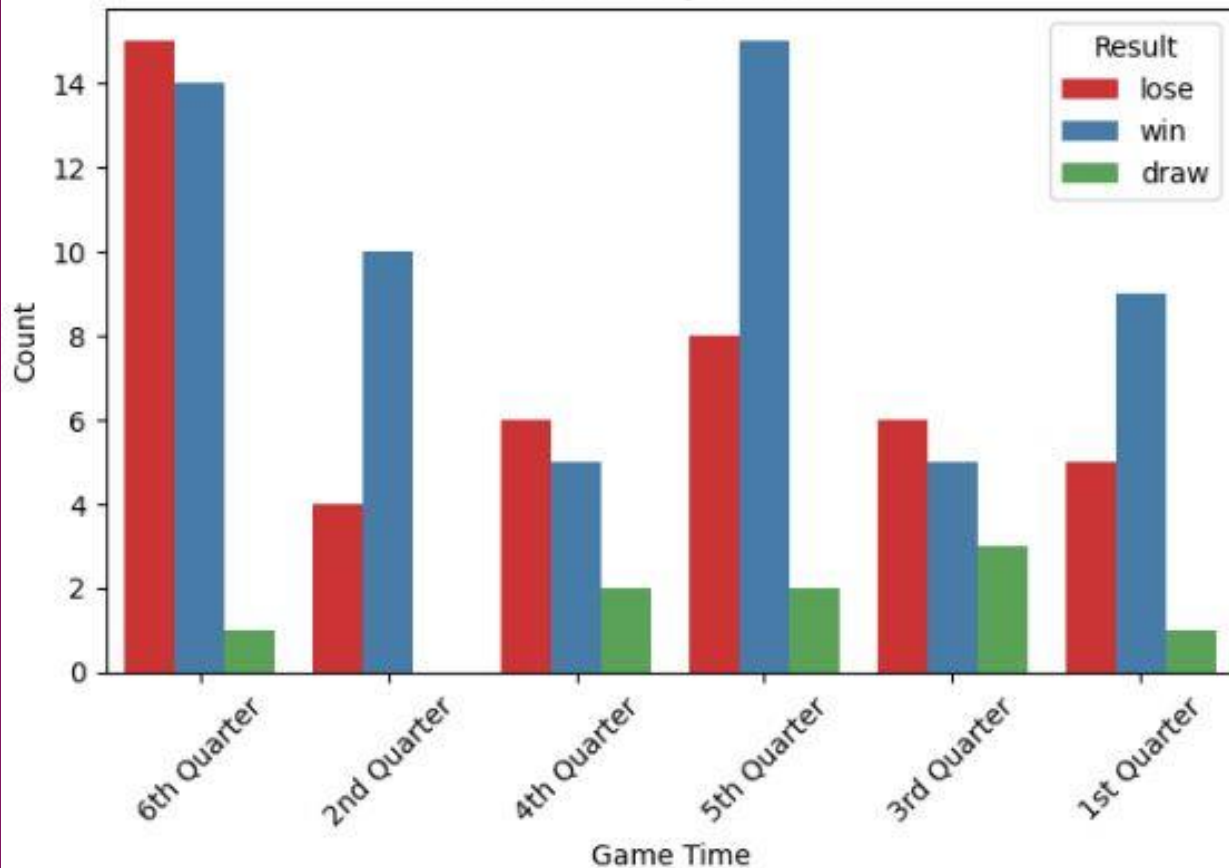


- Portugal wins the most when Cristiano scores against Switzerland.
- Portugal loses against Luxembourg most of the time, but Cristiano still scores.
- Against Greece, Czech Republic, Iceland, Cyprus, Northern Ireland, and Serbia, Portugal never wins a match, but Cristiano scores goals.
- Against Netherlands, Slovakia, Iran, Azerbaijan, Belgium, North Korea, Ghana, Wales, Morocco, Switzerland, Ukraine, Germany, Republic of Ireland, Portugal never loses a match, and Cristiano scores.
- Against Poland, Spain, and France, all matches end in a draw.

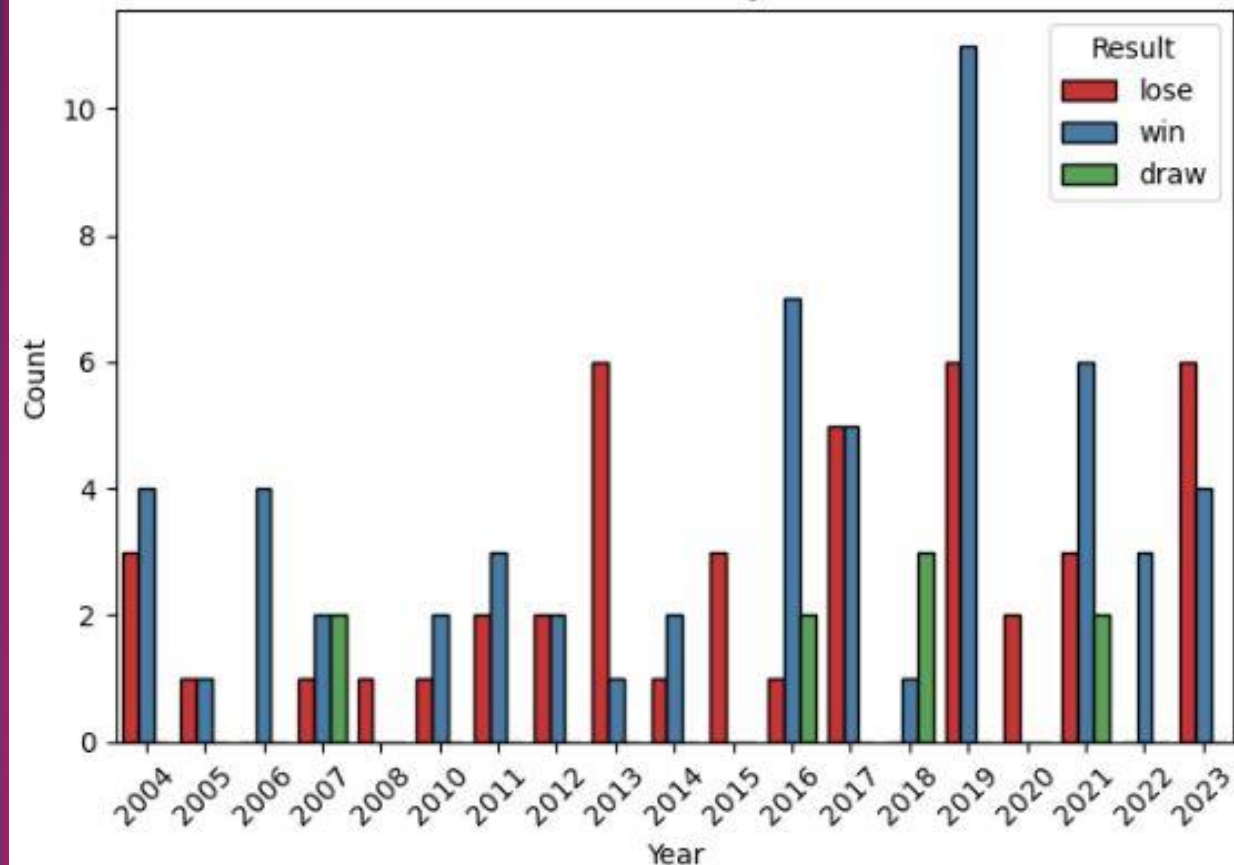


- Here we see that Portugal loses the maximum matches in UEFA Euro qualification, but Cristiano scores goals.
- Portugal wins the maximum number of matches in FIFA World Cup qualification, and Cristiano scores.
- The winning percentage is also high in the UEFA Nations League.
- The number of wins is very high in home matches rather than away matches.
- Interestingly, when Portugal played in neutral venues (not at home or away), the number of draws and wins is almost the same.

Match Result by Game Time



Match Result by Year



- When Cristiano scored goals in the 6th quarter, Portugal lost the match the most number of times.
- When Cristiano scored goals in the 5th quarter, Portugal won the game the most number of times.
- 2019 was a golden period for Cristiano. In this year, he scored goals, and Portugal won the game the most number of times.
- 2013 and 2023 were not good years for him. The losing percentage was high in these years.
- In 2006 and 2022, Portugal did not lose any match.
- However, in 2008, 2015, and 2020, Portugal did not win a match.



# Performance Analysis:

- Goal Scoring Records:
  - Cristiano Ronaldo has scored a total of 111 goals for his country, making him the highest goal scorer among all other players.
  - He scored the maximum number of goals (49) in home matches, indicating his prowess in front of the home crowd.
  - The highest number of goals were scored in the 50 to 70-minute time band, showcasing his ability to make an impact during crucial periods of the game.
- International Competitions:
  - Ronaldo scored 41 goals in the UEFA Euro Qualification round and 36 goals in the FIFA Qualification round, making him the top scorer in the UEFA Euro Qualification.
  - He has scored against various opponents, with Luxembourg, Switzerland, and Lithuania being the teams against which he scored the most goals.
- Goal Scoring Trends:
  - Ronaldo scored more than 20 goals after the 80th minute and more than 10 goals at the very beginning of matches, highlighting his ability to score in both the late stages and early phases of games.
  - Additionally, the majority of his goals were scored outside these periods, within the 20 to 70-minute time band.



# Performance Analysis:

- Penalty Goals and Goal Distribution:
  - Cristiano scored 19 goals from penalties, accounting for 17.1% of his total goals for his country.
  - His goal distribution against various opponents and in different time quarters of the game demonstrates his adaptability and versatility on the field.
- Match Outcomes and Performance:
  - Portugal's winning percentage when Ronaldo played is 52.3%, indicating his significant contribution to the team's success.
  - Ronaldo's performance correlates with Portugal's success, with 2019 being a standout year for both him and the national team.
  - The analysis shows that when Cristiano Ronaldo plays for Portugal, they rarely have to go through penalty shootouts, highlighting his ability to help the team avoid intense pressure situations.
- Match Scenarios:
  - Ronaldo has scored against numerous teams, even in matches where Portugal did not emerge victorious.
  - Interestingly, there are opponents like Greece, Czech Republic, Iceland, Cyprus, Northern Ireland, and Serbia against whom Portugal never wins, but Ronaldo consistently scores goals.

# Performance Analysis:

- Tournament Performances:
  - Portugal has had varying degrees of success in different tournaments, with Ronaldo's performance often standing out even in matches where the team did not fare well.
- Yearly Performance Analysis:
  - Ronaldo's performance fluctuates from year to year, with notable highs in 2019 and lows in 2013 and 2023.
  - In some years, Portugal remained unbeaten (2006, 2022), while in others, they struggled to secure victories (2008, 2015, 2020).
  - Interestingly, Cristiano Ronaldo scored fewer goals in FIFA World Cup years.
- Venue and Neutral Matches:
  - The number of wins is higher in home matches compared to away matches, with neutral venues seeing a balanced number of draws and wins for Portugal when Ronaldo plays.
- Quarter-wise Goal Impact:
  - Ronaldo's goals in the 5th quarter often contribute to Portugal's victories, whereas goals in the 6th quarter are associated with more losses for the team.

# Conclusion:

From this analysis, it's clear that Cristiano Ronaldo is an exceptional goal scorer for Portugal. He's scored the most goals for his country, showing his skill and importance to the team. Whether it's scoring in crucial moments or consistently performing over the years, Ronaldo's influence on Portugal's success is undeniable.

*Thank you...*