

Step 1: Get the Olympic Data

Import data in power query or SQL

Step 2: Clean and Prepare the Data

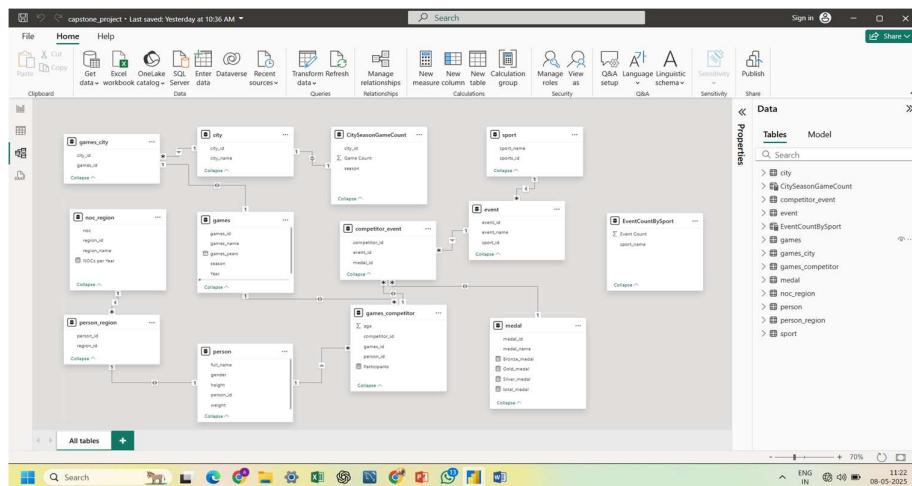
Use **Power Query** or Excel to:

- Remove duplicates
- Handle missing data (e.g., missing age or medals)
- Split or format dates/columns as needed
- Normalize gender labels (e.g., M → Male, F → Female)

You can also use **SQL** for this step if you're loading the data from a database.

Step 3: Define Tables or Dimensions

Use relationships in Power BI's **Model View** to connect them.



Step 4: Create Visuals for Each Question

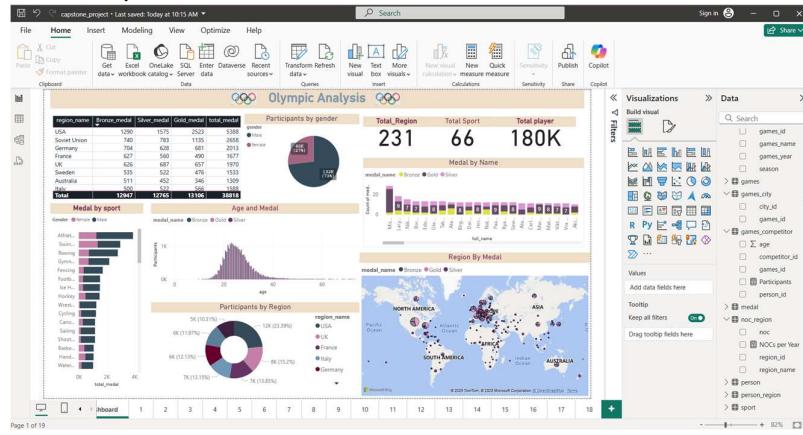
Here are the visuals you can create for each of your questions:

Question	Suggested Visual
1. Games by Season	Bar chart (x: Season, y: Count)

Question	Suggested Visual
2. Games by Decade	Histogram or line chart (x: Decade, y: Games)
3. Cities with most Games	Bar chart sorted descending
4. Sports by Season	Stacked bar or treemap
5. Sports with most events	Bar chart (x: Sport, y: Events)
6. Participation over time	Line chart (x: Year, y: Athletes by Sport)
7. Events per Sport	Table or bar chart
8. Events by Gender	Stacked bar (x: Gender, y: Events)
9. Events over time	Line chart (x: Year, y: Event Count)
10. Participants by Gender	Pie chart or bar chart
11. Countries with most participants	Bar chart
12. Age distribution	Box plot or histogram by Games
13. Medals per Olympics	Line or bar chart (x: Year, y: Medal Count)
14. Countries with most golds	Bar chart
15. Medals by Sport	Heatmap (x: Sport, y: Medal Type or Country)
16. NOCs per Game	Line chart
17. Participants by Region	Bar or map chart
18. Medals by Region	Stacked bar or map chart

Step 5: Create Dashboard Pages

Structure your dashboard with tabs or sections:



- **Overview** (Total Games, Participants, Events)
- **Participation** (By Gender, Country, Age)
- **Sports & Events** (Trends and Distribution)
- **Medals** (By Country, Region, Sport)
- **History** (Changes Over Time)

Olympics Analysis Publication Report

1. Title

Capstone Project of the Olympic Games: Trends, Participation, and Performance

2. Executive Summary

This report presents a detailed analysis of the Olympic Games data, covering hosting trends, sport popularity, athlete demographics, regional influences, and performance outcomes over recent decades. The goal is to uncover patterns and insights that inform stakeholders in sports management, policy-making, and sports analytics.

3. Introduction

- **Objective:** To analyze historical Olympic data to identify trends in host countries, sports participation, medal distribution, and athlete profiles.
- **Scope:** Summer and Winter Olympics from year 1890 to 2020.
- **Data Sources:** International Olympic Committee (IOC) official records, Kaggle datasets, Sports Reference databases.

4. Methodology

- **Data Collection:** Aggregated data from multiple verified sources including athlete profiles, event results, and country participation.
 - **Tools Used:** Power BI for visualization, SQL for querying large datasets.
 - **Analysis Techniques:** Time-series trend analysis, correlation studies, clustering athletes by attributes, geographic analysis.
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5. Key Findings

Hosting Trends

- Countries with multiple hosting rights (e.g., USA, Japan, France).
- Shifts in host continent frequency over decades.

Sport Popularity

- Growth or decline in participation numbers by sport.
- Introduction of new sports and their impact.
- Correlation between host country and spike in specific sports participation.

Athlete Demographics

- Trends in athlete age, height, and weight across sports.
- Regional dominance in certain sports based on athlete characteristics.

Medal Distribution

- Country-wise medal tallies and shifts over time.
 - Influence of socio-economic factors on medal success.
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6. Visualizations

Include sample charts/graphs here such as:

- Host countries over time (line or bar chart)
 - Participation by sport (stacked bar chart)
 - Athlete height and weight distribution (scatter plot)
 - Medal counts by country (heatmap or choropleth map)
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7. Discussion

Interpret key trends and unexpected findings. Discuss possible reasons behind shifts in hosting or participation and implications for future Olympics.

8. Conclusion

Summarize the main takeaways, potential impact on sports policy, and recommendations for further research or data collection.

9. References

- ACCIO JOB Data set
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10. Appendices (optional)

- Detailed data tables
- Code snippets or query samples
- Additional charts