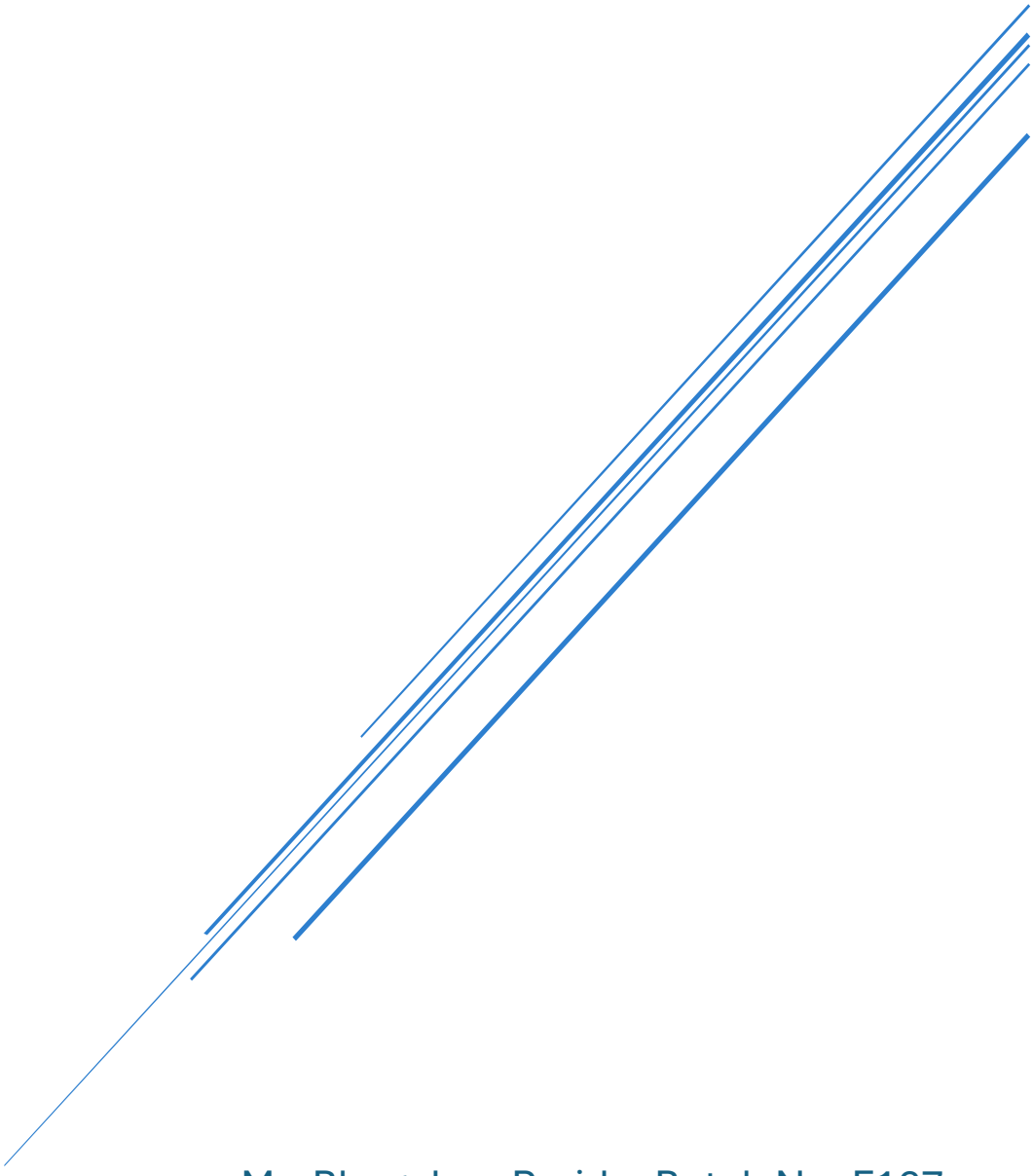
PARALYMPIC GAMES PERFORMANCE DASHBOARD-OVERALL ANALYSIS

A Hands-on Project for Data Analytics Certificate



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Paralympic Games Performance Dashboard – Overall Analysis

Data Analytics Certificate – Power BI Live Dashboard (A Hands-on Project)

1. About the Project Report

This project report documents the end-to-end development of a Power BI Live Dashboard created as part of the Data Analytics Certificate assignment. The objective of the project is to analyse overall Paralympic Games performance using historical data and present insights through clear and interactive visualizations.

The report explains the dataset used, the data preparation steps performed in Power Query, the DAX measures created for key metrics, and the analytical insights derived from the dashboard. The focus is on overall medal performance across years, countries (NPCs), continents, and medal types.

This report complements the Power BI dashboard by providing context, methodology, and key findings, ensuring transparency and clarity in the analytical process.

This project is submitted as part of the **Data Analytics Certificate – Power BI Live Dashboard (Hands-on Project)**.

2. Project Report

Objective

The objective of this project is to analyze overall performance trends in the Paralympic Games using historical data and present insights through an interactive Power BI dashboard. The dashboard focuses on medal distribution, country-wise performance, continent-wise contribution, and trends over time.

Dataset Overview

- Dataset Name: Paralympics Dataset
- Source Format: Excel (single sheet)
- Total Rows: 2,209
- Total Columns: 18
- Time Period: 1960 to 2018
- Games Season: Summer and Winter
- Distinct NPCs (Countries): 73
- Distinct Sports: 36

- Continents Covered: 4

Key columns used:

- Games Year, Games Season
- NPC Name (Country)
- Rank Type (Overall / Sport)
- Gold, Silver, Bronze Medals
- Continent

Tools Used

- Microsoft Power BI Desktop
- Power Query Editor (for data cleaning)
- DAX (for KPI and measure calculations)

3. Data Story (This is how you explain the dashboard)

This dashboard tells the story of how countries and continents have performed in the Paralympic Games over time.

At the top, KPI cards summarize the **total number of medals**, broken down into gold, silver, and bronze, giving an immediate sense of scale.

The year-wise trend chart shows how medal counts have evolved from 1960 to 2018, reflecting changes in participation and scale of the Games.

Country-wise (NPC) and continent-wise charts highlight dominant performers, helping identify which regions and nations consistently contribute the most medals.

Finally, the medal distribution chart provides a clear view of how medals are split across gold, silver, and bronze categories.

Interactive slicers allow users to filter by **Games Year** and **Season**, making the analysis flexible and user-driven.

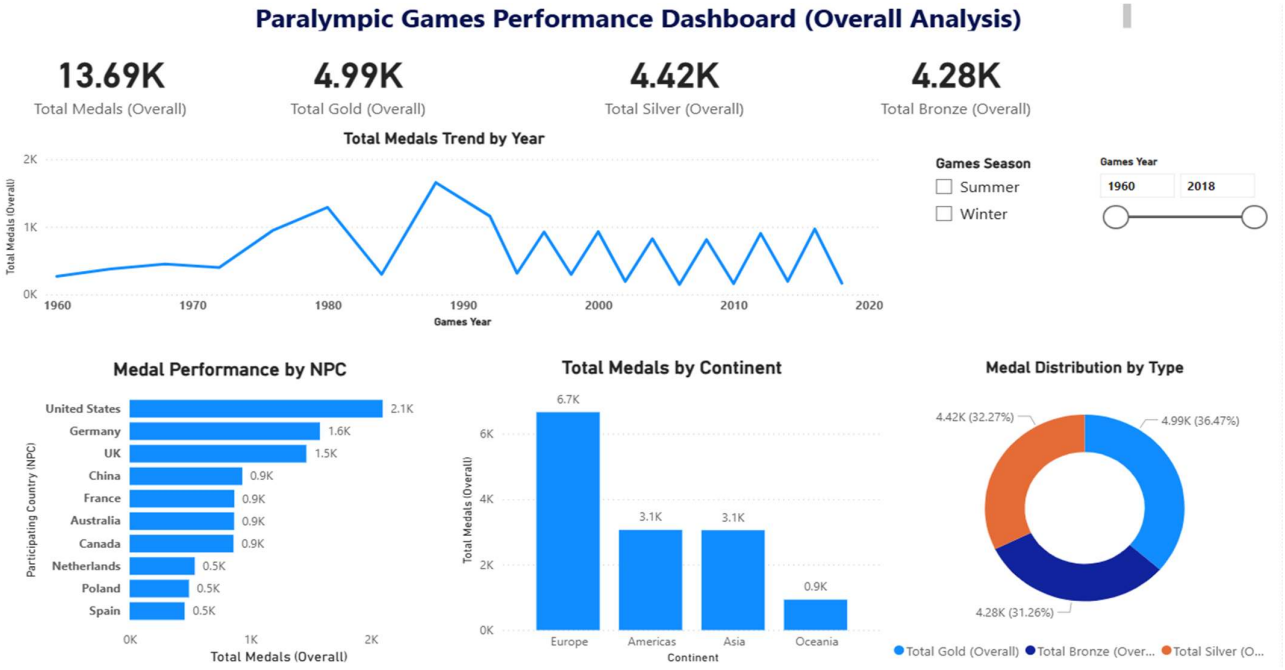
3.1 Key Findings

- A total of **13.69K medals** were awarded across all Paralympic Games (overall ranking).
- Medal distribution across gold, silver, and bronze is relatively balanced, with slight variation due to aggregation across years and countries.
- The top NPCs contribute a significantly higher share of total medals compared to others
- Europe and the Americas contribute a significant share of total medals, showing regional strength.

- Medal counts generally increase over time, reflecting growth in participation and scale of the Paralympic Games.
- Filtering by season shows different performance patterns between Summer and Winter Games.

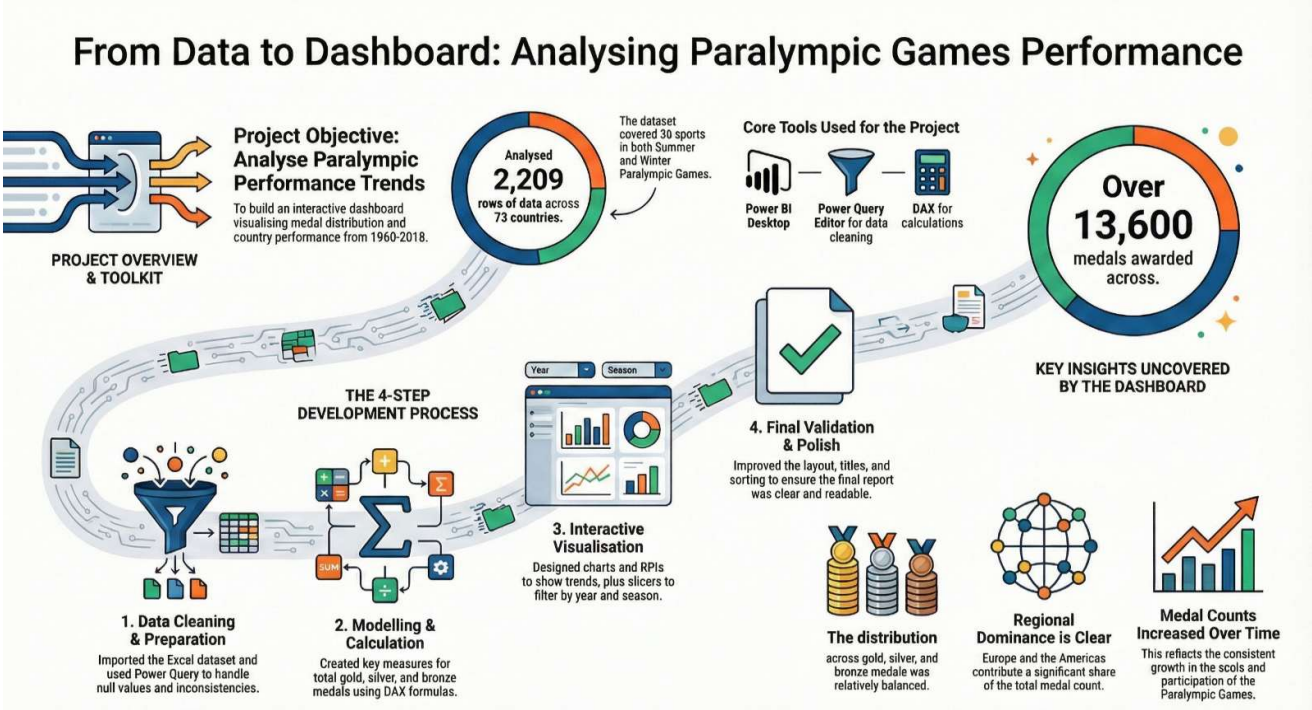
4. The Dashboard

This section presents the final Power BI dashboard, highlighting KPIs, charts, and slicers used to analyse overall Paralympic Games performance.



5. A Snapshot from Data to the Dashboard

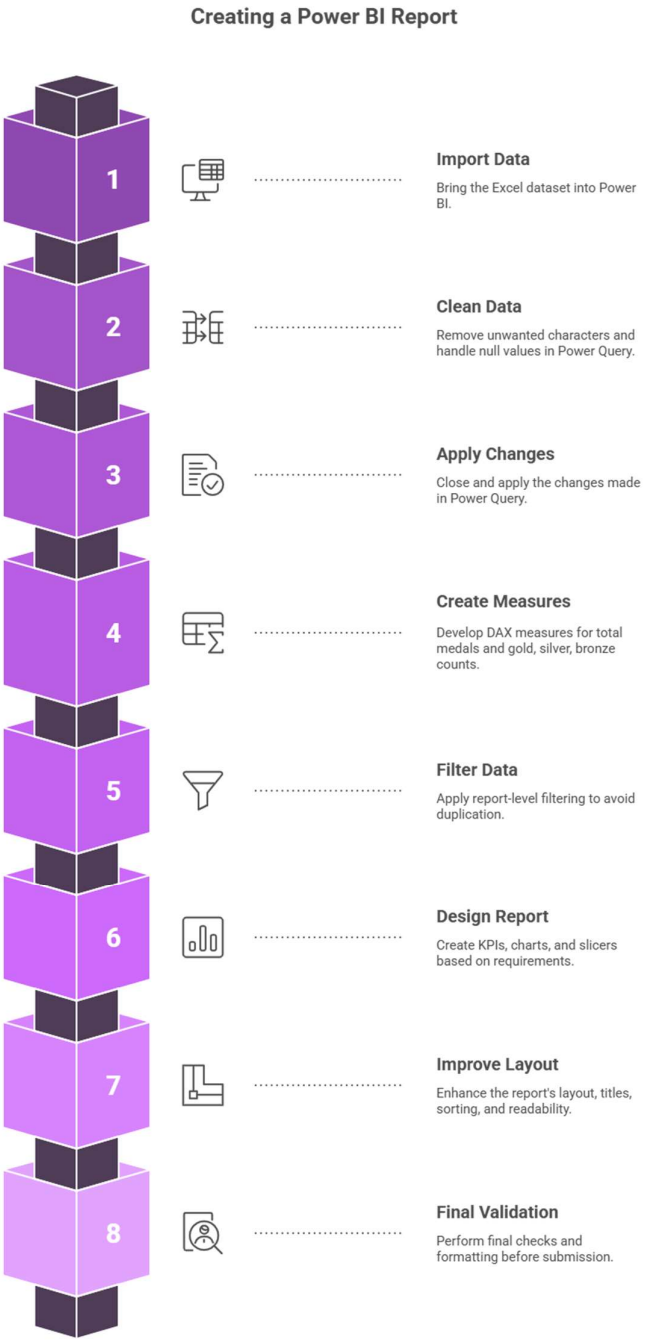
This section illustrates the transformation of raw data into meaningful visuals through data cleaning, modelling, and visualization steps.



6. Process Followed (Step-by-step)

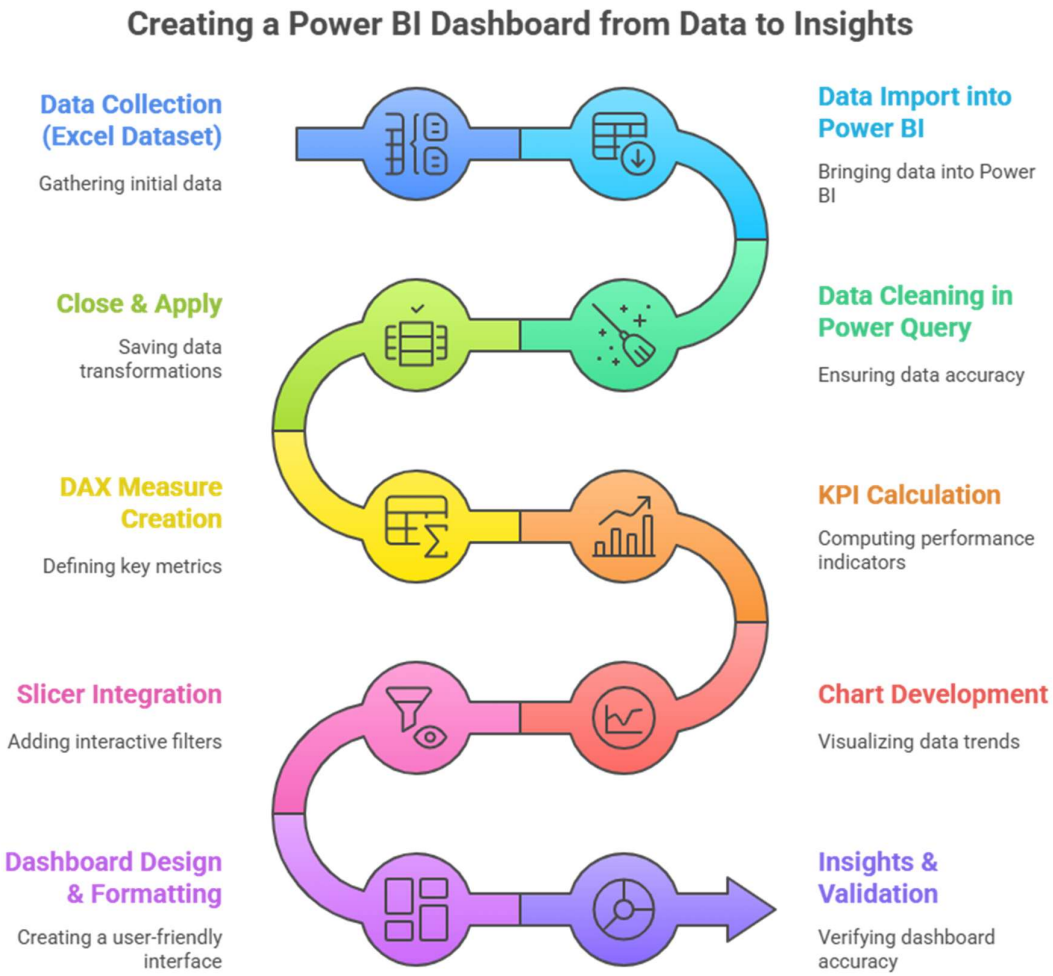
1. Imported the Excel dataset into Power BI
2. Performed data cleaning in Power Query:
    - Removed unwanted characters (e.g., “Europe[a]” → “Europe”)
    - Handled null values (npc_rank replaced with 0)
    - Verified data types and consistency
3. Closed and applied Power Query changes
4. Created DAX measures for:
    - Total Medals (Overall)
    - Total Gold, Silver, Bronze (Overall)
5. Applied report-level filtering to avoid duplication between “Overall” and “Sport” rank types
6. Designed KPIs, charts, and slicers based on assignment requirements
7. Improved layout, titles, sorting, and readability
8. Final validation and formatting before submission

7. Dashboard Design Flow



8. Flowchart from Data to the Insights

The following flowchart summarizes the end-to-end analytical process followed in this project



9. Conclusion

This project successfully demonstrates the use of Power BI for analyzing and visualizing large historical datasets. Through effective data cleaning, DAX-based measure creation, and thoughtful dashboard design, meaningful insights into Paralympic Games performance were generated.

The dashboard highlights overall medal trends over time, identifies top-performing NPCs and continents, and presents a clear distribution of medal types. Interactive slicers further enhance the analytical flexibility of the report.

Overall, this project strengthened practical skills in data modelling, analytical thinking, and dashboard storytelling, aligning well with the objectives of the Data Analytics Certificate program.