Similarities between Power BI and Tableau

- **Variety of different visualizations:**

  Both Tableau and Power BI provide advanced visualization capabilities to transform raw data into meaningful insights. The options for visualizations include bar and line charts, tree maps, and geographical maps. On both platforms, we can interact with these visualizations through hovering over them to get more information and applying filters.

- **Data Connectivity**

  Both platforms can connect to a wide range of sources. It includes MS Excel, CSV, JSON, and the paid versions gives access to 50+ additional data connectors such as Google Bigquery, Amazon Redsift, and Salesforce.

- **Interactive Dashborads**

  Both platforms allow the creatoion of interactive dashboards with drilldown and filtering capabilities.

- **Code Free and User-Friendly**

  Both Power BI and Tableau are code free which makes it user friendly for beginners to understand.

- **AI and Machine Learning Integration'**

  Both offer AI-powered analytics and predictive modeling

- **Collaboration and Sharing**

  Both tools allow users to share reports and dashboards with others, either within the organization or externally.

Differences between Power PI and Tableau

Features	Power BI	Tableau
Data Handling	Best for small to medium-sized datasets	Handles large datasets more efficiently
Ease of Use	More user-friendly for beginners, especially for those familiar with Excel	Intuitive but may require more learning for advanced features
Integration	Seamless with Microsoft tools (Excel, Azure, Sharepoint)	Works better with diverse data environements
Platform Compatibility	Only works on Microsoft Windows	Works for both Mac and windows
Programming Languages	C use Data Analysis Expression and M language in for data manipulation and data modeling. Also use Microsoft revolution analytics to connect the R programming language.	More choice and flexibility as well as easier integration with R, can implement the Tableau Software Development Kit with Python, Java, C, and C++.
Performance	Can slow down with very large datasets	Optimized for big data and complex analysis

Dashboard Design & Visuals

1) Key Performance Indicators (KPIs)

- Total Movies (9,655)
- Total Ratings Categories (25)
- Total Genres (519)
- Movies Released Within Years (1,442)
- Filter Year Slider (1920-2021) for interactive year-based filtering.
- Filter by Country, Genre, and Type for analyzing region-specific content. These KPIs provide a quick overview of Amazon Prime's content volume, diversity, and trends

2) Content Analysis (Genre, Release Year, Age Ratings)

- **Number of Movies by Ratings (Pie Chart)**
  - Shows the proportion of movies available in different age rating categories.
  - Highlights the dominance of PG-13, R-rated, and 18+ content.
- **Count of Movies by Genre & Type (Bar Chart)**
  - Drama, Comedy, and Documentary dominate the genre distribution.
  - The comparison of Movies vs. TV Shows within genres.
- **Count of Movies by Release Year & Type (Line Chart)**

- Displays the increase in content production over time, especially in the 2000s.
- Differentiates between Movies & TV Shows.

- **Key Insights:**

- Drama & Comedy dominate the platform.
- Significant rise in content production after 2000, indicating Amazon's expansion.
- Diverse age ratings, but the majority of content is PG-13 or R-rated.

3) Performance Insights (IMDb Ratings, Genres, Release Years)

🔹 **Count of Release Year by Rating (Bar Chart)**

- Shows how age ratings are distributed over time.
- Most recent releases are rated PG-13 and R.

- **Key Insights:**

- Older content has more diverse ratings.
- Recent releases focus on mature audiences (PG-13, R, 18+).
- Content growth is exponential post-2000.

4) Global Reach (Countries & Languages)

🔹 **Country-wise Content Distribution (Map)**

- The world map visualizes content distribution across different countries.

- The interactive slicer allows filtering by Country, Genre, and Type.

- **Key Insights:**

- Amazon Prime's content is widely distributed but concentrated in the USA, UK, and Europe.

- Regional diversity can be improved, especially in Africa & South America.

5) Trends in Content Creation Over Time

- **Movies & TV Show Growth Over Time (Line Chart)**

- The exponential rise in content production after 2000.

- TV shows saw an increase after 2010, indicating Amazon Prime's expansion.

- **Key Insights:**

- Amazon has increased its content acquisition dramatically post-2000.

- TV Shows have become a bigger focus post-2010.

Actionable Recommendations

1) Expand Regional Content

- Focus on underrepresented regions like Africa, South America, and Asia to attract a more global audience.

2) Diversify Content Genres

- Increase investment in Sci-Fi, Thriller, and Horror genres, as they are underrepresented compared to Drama & Comedy.

3) Improve Content for Younger Audiences

- Since most content is PG-13 or R-rated, adding more family-friendly content (G, PG) can attract younger viewers.

4) Leverage High-Rated Genres

- If certain genres receive higher IMDb ratings, prioritize new productions & acquisitions in those categories.