**MovieLens Data Story: Classic Movies Audience & Engagement Analysis**

**Executive Summary**

MovieLens, a digital platform for film and streaming content insights, aims to launch its "Movie Talkies: Classic" edition. To support this initiative, a Power BI dashboard was developed to uncover audience behavior, preferences, and engagement patterns related to classic movies. The dashboard addresses eight key business questions, providing insight into user demographics, genre preferences, rating trends, and engagement by age and occupation. The analysis enables MovieLens to target promotions more effectively, grow its viewer base, and connect with both nostalgic and new audiences.

**Data Overview**

The dataset comprises three core tables:

* **Movies Table**: Includes movie titles, release years, and genres.
* **Ratings Table**: Contains user ratings with timestamps.
* **Users Table**: Includes user ID, gender, age, occupation, and zip code.

**Transformations & Modeling:**

* Movie names standardized, years formatted.
* Timestamps converted and average ratings calculated.
* Age grouped into bins; zip codes mapped to regions.
* Data model created with many-to-one relationships:
  + Ratings -> Movies
  + Ratings -> Users

All tables use **bi-directional cross-filtering** for accurate, dynamic visuals.

**Dashboard Structure & Key Insights**

**1. Movie Release & Genre Diversity**

* **Insight**: 3883 movies were released until the year 2000, and 301 distinct genres emerged up to 2020.
* **Business Value**: Helps estimate classic movie volume and genre evolution. Supports content curation.

**2. User Base & Gender Composition**

* **Insight**: MovieLens has 6040 users, with **~72% male** user base.
* **Business Value**: Gender skew informs promotional strategies and highlights the need to diversify engagement campaigns.

**3. Genre Preferences by Gender**

* **Insight**: Comedy, Drama, and Romance genres attract the most engagement from both male and female users.
* **Business Value**: Focus areas for genre-based classic film promotions. Enables gender-personalized content suggestions.

**4. Average Ratings for Classic Movies & Genre Spread**

* **Insight**: Classic movies receive an **average rating of 3.58**, indicating moderate to positive reception. Genre distribution shows Comedy and Drama lead in volume.
* **Business Value**: Guides which genres to include in the "Movie Talkies" collection. Identifies well-received content themes.

**5. Demographics & Geographic Distribution**

* **Insight**: Young adults dominate the user base, especially males. Most users reside in North America.
* **Business Value**: Target classic film campaigns to younger male audiences while exploring engagement strategies for underrepresented regions.

**6. Engagement by Age & Profession**

* **Insight**: Young adults and college grads show highest engagement with classic films.
* **Business Value**: Helps tailor marketing by profession and age group. Campaigns could leverage college-based communities.

**7. Top-Rated Movies & Genre Breakdown**

* **Insight**: Top-rated classics include *Bittersweet Motel* and *Lured*. Genres like Animation|Comedy|Thriller top the charts. Retired users tend to rate more.
* **Business Value**: Suggests older users engage more deeply—promotions can cater to their nostalgia. Genre insights refine content offerings.

**8. Ratings by Age Group & Genre Over Time**

* **Insight**: Older users give more ratings, showing higher engagement. Ratings trend declined post-2000 with a spike in select years.
* **Business Value**: Understand generational trends in feedback. Enables strategy to revive interest among younger users.

**Tools & Enhancements Used**

* **Power BI Visuals**: Clustered/stacked bars, scatter plots, slicers, maps, tooltips.
* **Custom Features**: Trend lines, tooltips, page navigation buttons.
* **Interactivity**: Age and occupation slicers; genre-specific filters for deeper analysis.

**Strategic Use Cases**

* **Marketing Teams**: Plan gender- and age-specific campaigns for classic content.
* **Content Curators**: Prioritize genres with strong cross-demographic appeal.
* **User Growth Teams**: Identify low-engagement user segments and develop personalized outreach.
* **Product Managers**: Enhance recommendation engines based on engagement trends and genre affinities.

**Conclusion & Next Steps**

This dashboard gives a data-driven foundation for MovieLens to confidently launch and promote its "Classic" content edition. By understanding how demographics influence genre preference, rating behavior, and engagement, the platform can tailor experiences that resonate with both older nostalgic viewers and new audiences. Future improvements may include time-based viewing patterns, mobile consumption trends, and integration with external review sources for broader sentiment analysis.