Board Game Ratings Analysis: Key Insights for Publishers

Overview

This project analyzes 18,304 board games from a Kaggle dataset to identify factors driving high player ratings, providing actionable insights for a mid-sized game publisher. Using Excel for data cleaning and Tableau Public for visualization, I developed a dashboard to explore trends in game mechanics, expansions, licensed properties, and classic vs. modern editions. A Bayesian weighted rating formula ensured reliable rankings for games with 10 to 99 votes.

Methodology

- **Data Source**: Kaggle's 20,000 Boardgames Dataset (18,304 games with $\geq$10 ratings).
- **Data Cleaning**: Removed duplicates and incomplete entries in Excel; categorized games by mehanics, type, and franchise.
- **Bayesian Formula**: Adjusted ratings for low-vote games:

$$\text{Weighted Score} = \frac{v}{v+100} \cdot R + \frac{100}{v+100} \cdot C$$

  (R: game rating, v: votes, C: global average, $m = 100$).

- **Analysis**: Conducted descriptive statistics and correlation tests in Excel.
- **Visualization**: Built a Tableau Public dashboard with five charts (bullet graph, box and whisker, horizontal bar, pie, packed bubbles).

Key Findings

- Card & dice hybrids (median rating 6.422) outperform dice-only games (6.267).
- Expansions have higher ratings than standalone games.
- Superhero franchises (e.g., DC Comics, 6.627) outperform movie tie-ins (e.g., Star Wars, 6.217) but not original titles (6.4007).
- Classics like Dungeons & Dragons rate higher (6.0+) than Monopoly (5.755).
- Higher vote counts stabilize ratings.

Recommendations

- Prioritize card-driven or hybrid mechanics for higher ratings.
- Develop quality expansions for successful titles.
- Use superhero franchises selectively; avoid over-relying on movie tie-ins.
- Modernize classics cautiously, focusing on gameplay.
- Encourage early playtesting to predict success.

Outcome

The dashboard, published at `https://tinyurl.com/2m98vxaf`, offers an intuitive interface for exploring board game trends. This project showcases skills in data cleaning (Excel), visualization (Tableau), and storytelling, delivering insights to guide game publishing strategies.