Board Game Reviews

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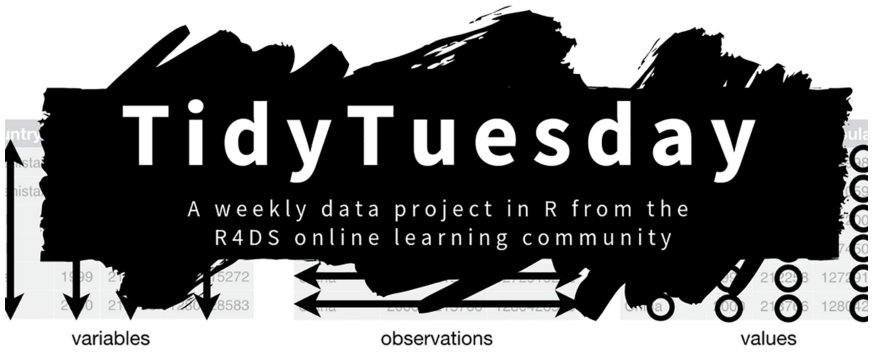
NONPARAMETRIC STATISTICS

THE DATASET

The dataset is obtained through **R-Tidy-Tuesday** and originates from **BoardGameGeek**.com, the most relevant website in the field of board games

BGG contains detailed information regarding 21631 games, provided either by users or by the producers. BoardGameGeek also provides an exchange platform, whose data we can access.

Lastly, we can also use the text data of all reviews in the portal.



BOARD GAME GEEK

MAIN FEATURES

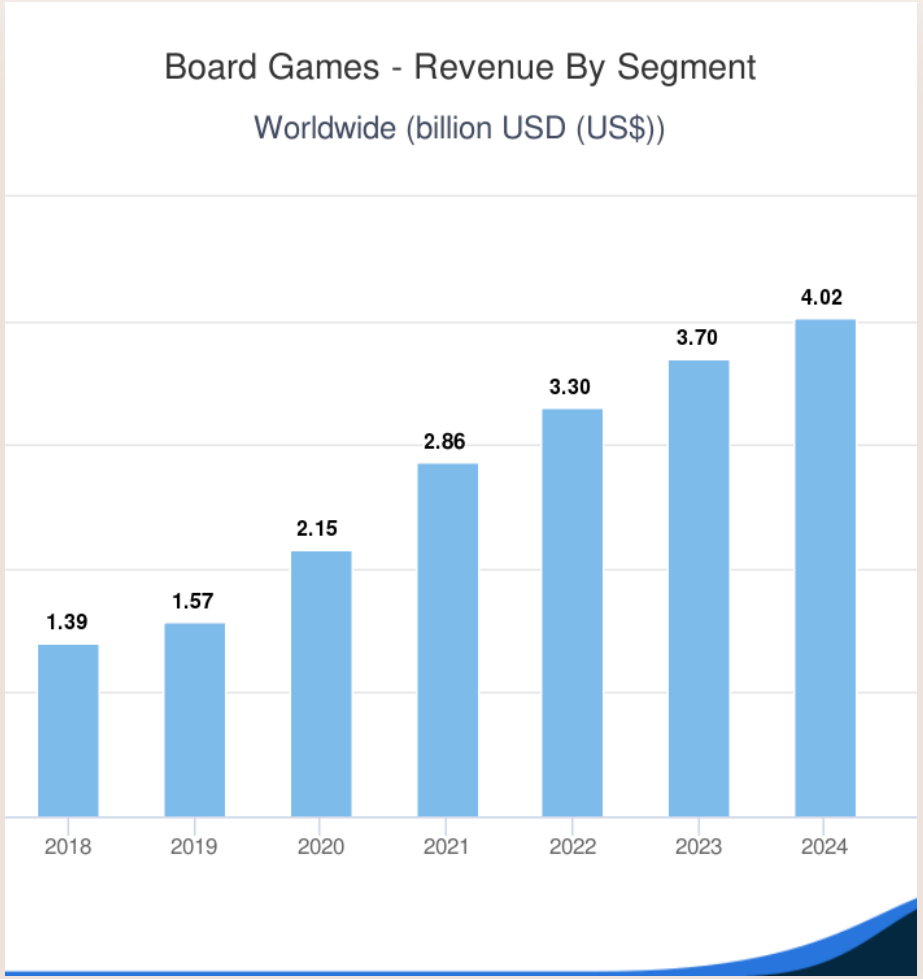
- **Ratings** provided by users on BoardGameGeek: average, number of reviews, standard deviation
- **Complexity** of the game evaluated by users
- Average playing **time** indicated by the producer
- **Category** of the game: setting and main dynamics – ('Abstract', 'Medieval', 'Medical', …)
- **Mechanic**: how the game is physically played – ('Roll a dice', 'Card Game', …)
- **Players** information: minimum and maximum number, minimum age
- **Appeal**: number of users owning the game or wishing / trading for it

Why Board Games?

Board games are becoming more and more **popular** nowadays. Their popularity started growing during covid-19 outbreak, and people now can't stop playing them!

Thanks to many recent online playing environment, it is now possible to play almost any existing board game with a little expense.

Boardgame producers need now more than ever to understand the key factor driving the success of a game, but in terms of sales and rating from hardcore players.



THE NONPARAMETRIC APPROACH

Depth Measures / Robust Statistics

Look for outlier or errors in the description of games and handle them through methods of robust statistics

Permutational Tests

Analyze difference in rating and complexity among the most common categories

NonParametric Regression

Provide a model for the rating of a game given its characteristic features

Conformal Prediction

Improve our prediction with confidence bands

Our **Questions**

- Which dynamics or categories make a game more **popular**?
- How can we **predict** the rating of a game and its **commercial** success?