Academia to Board Game Brilliance

A Data-Driven Strategy for Academia The Board Game

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Academia to Board Game Brilliance - A Data-Driven Strategy for 'Academia: The Board Game

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Summary

```
#| echo: false
#| warning: false
#|
library(tidytuesdayR)
# Load the required library
```

```
library(httr)
library(dplyr)
```

Attaching package: 'dplyr'

The following objects are masked from 'package:stats':

    filter, lag

The following objects are masked from 'package:base':

    intersect, setdiff, setequal, union

```
tuesdata <- tidytuesdayR::tt_load('2022-01-25')
```

Only 9 Github queries remaining until 2024-06-08 11:20:43 CEST.

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Only 8 Github queries remaining until 2024-06-08 11:20:43 CEST.

--- Compiling #TidyTuesday Information for 2022-01-25 ----

Only 7 Github queries remaining until 2024-06-08 11:20:43 CEST.

--- There are 2 files available ---

Only 6 Github queries remaining until 2024-06-08 11:20:43 CEST.

--- Starting Download ---

Only 6 Github queries remaining until 2024-06-08 11:20:43 CEST.

```
    Downloading file 1 of 2: `details.csv`
```

```
Only 5 Github queries remaining until 2024-06-08 11:20:43  CEST.
```

```
    Downloading file 2 of 2: `ratings.csv`
```

```
Only 4 Github queries remaining until 2024-06-08 11:20:43  CEST.
```

```
--- Download complete ---
```

```r
ratings <- tuesdata$ratings
details <- tuesdata$details
```

Data Preparation and Description

Data Source

The data source pertains to BoardGameGeek Reviews and is composed of two datasets. The first dataset contains details about various board games, and the second dataset includes reviews from users for these games, linked by an ID. All reviews are from users, and their comments are included.

```
Ratings Dataset:
```

```
Number of rows: 21831
```

```
Number of columns: 10
```

```
Details Dataset:
```

```
Number of observations: 21631
```

```
Number of columns: 23
```

Table 1: Board game details dataset

variable	class	description
num	double	Game number
id	double	Game ID
primary	character	Primary name
description	character	Description of game
yearpublished	double	Year published
minplayers	double	Min n of players
maxplayers	double	Max n of players
playingtime	double	Playing time in minutes
minplaytime	double	Min play time
maxplaytime	double	Max play time
minage	double	minimum age
boardgamecategory	character	Category
boardgamemechanic	character	Mechanic
boardgamefamily	character	Board game family
boardgameexpansion	character	Expansion
boardgameimplementation	character	Implementation
boardgamedesigner	character	Designer
boardgameartist	character	Artist
boardgamepublisher	character	Publisher
owned	double	Num owned
trading	double	Num trading
wanting	double	Num wanting
wishing	double	Num wishing

Table 2: Ratings dataset

variable	class	description
num	double	Game number
id	double	Game ID
name	character	Game name
year	double	Game year
rank	double	Game rank
average	double	Average rating
bayes_average	double	Bayes average rating
users_rated	double	Users rated
url	character	Game url
thumbnail	character	Game thumbnail

Data Preparation

Detail the steps taken to clean and preprocess the data in R. Include code snippets where appropriate.

Performance Measures

Discuss two performance measures (e.g., average rating, number of ratings) and their relevance to the goal of making money.

Key Variables

Identify and describe three to four key variables that could inform game design actions (e.g., mechanics, play time, number of players).

Control Variables

Identify variables that might affect game performance but are not part of the strategy options (e.g., year published, game category).

Data Summary

Provide a table and a figure summarizing the frequency and distributions of relevant variables.

Data Analysis

Relationships with Performance Measures

Analyze how key design variables relate to performance measures using appropriate statistical methods.

Model Evaluation

Discuss the appropriateness of the model based on R output. Explore other methods to test the relationships (e.g., ANOVA, correlation analysis).

Causality Discussion

Examine the potential for causal inference in the dataset. Discuss limitations and assumptions.

Results Presentation

Provide a single result table and a figure to present the analysis findings.

Strategy Recommendation

Strategic Insights Build on the analysis to provide strategic recommendations for the game design.

Limitations

Discuss the limitations of the analysis and recommendations.

Additional Data and Analysis

Suggest additional data that could further inform the strategy and potential analyses that could be conducted with it.

Conclusion

Summarize the key findings and strategic recommendations. Reinforce the goal of creating a successful and profitable board game.

References

List all sources and references used in the report.