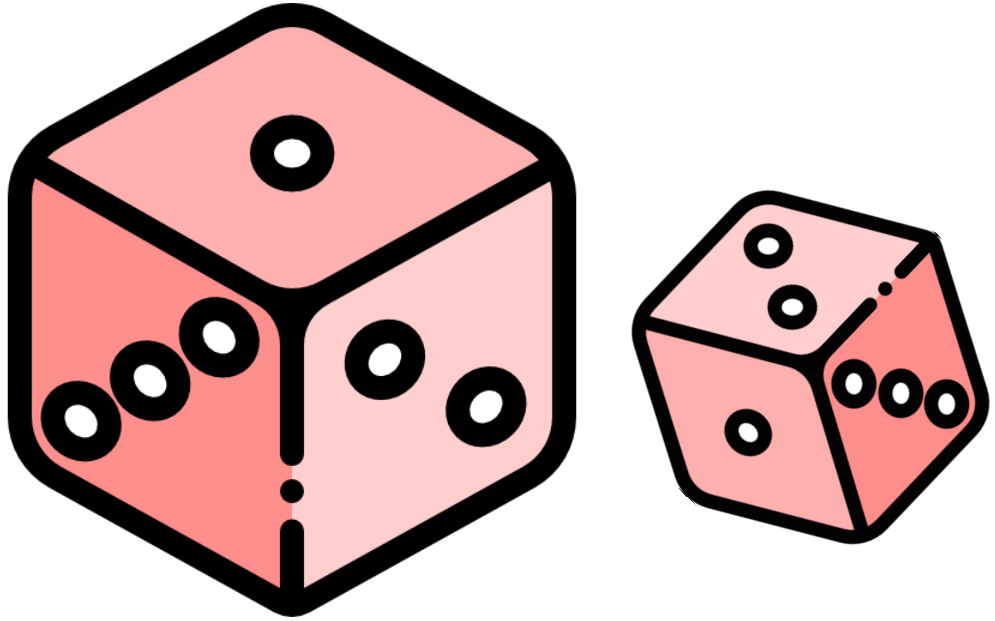
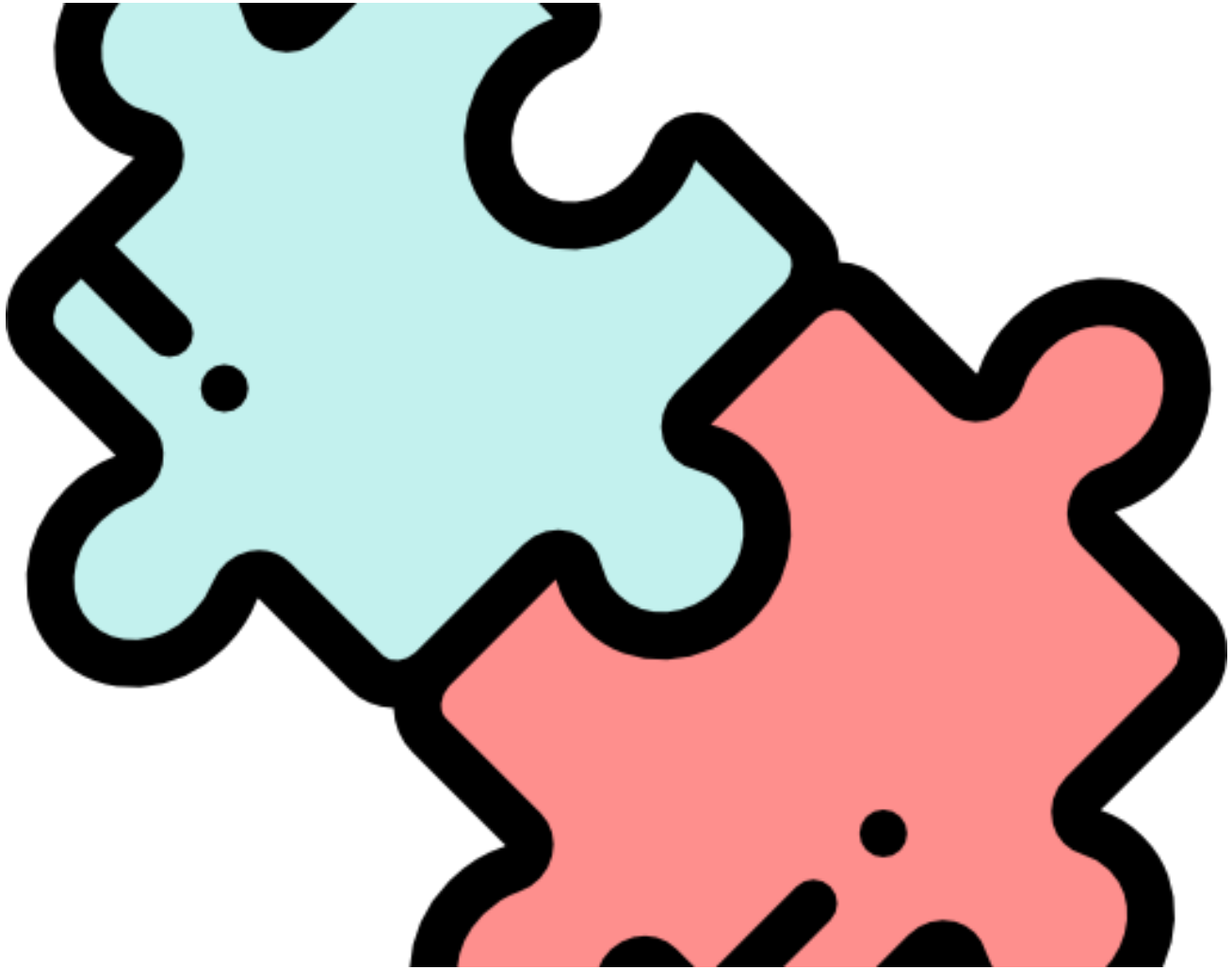


BEAT YOUR BOARDOM!

joseph chin, jeffrey fulkerson, helena shi, abhinaya a.

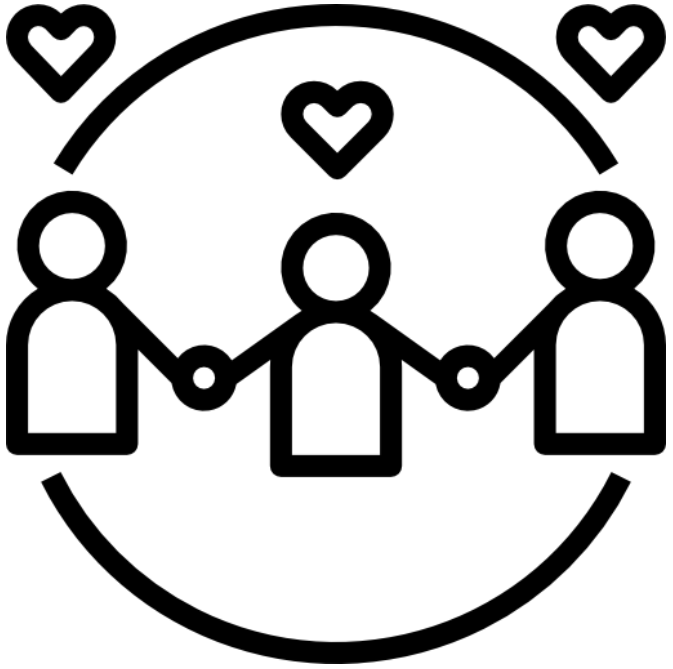
agenda

- Introduction
- Recommendations
- Exploratory Analysis
- Prediction Models



why board games?

$8.12 BILLION

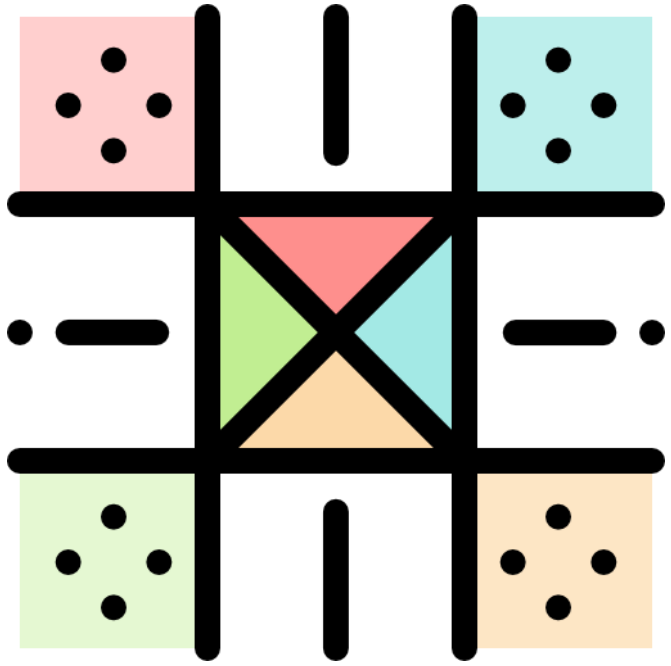


PRICELESS!

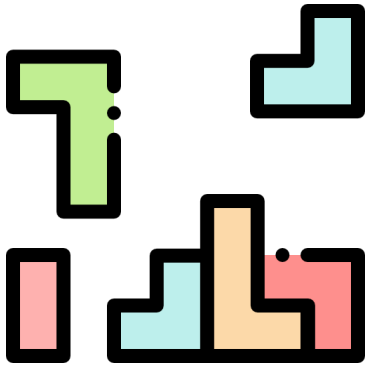
the ultimate questions

1. What features can we recommend our clients to produce the highest ratings in a new game?

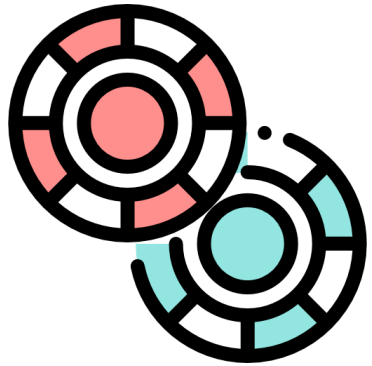
2. If a user inputs certain characteristics, can we recommend a similar game for them to try?



recommendations



complex
& longer
games



target
13-21
year olds

wargames
w/ card
drafting

AN INTERACTIVE EXPLORER FOR BGG DATA

Interact with the widgets on the left to query a subset of board games to plot.

Information courtesy of Board Game Geek (https://www.boardgamegeek.com/).

Minimum number of votes: **100**

Category

All

Minimum Age of player: **6**

End Year of game release: **2018**

Game Complexity: **1.50**

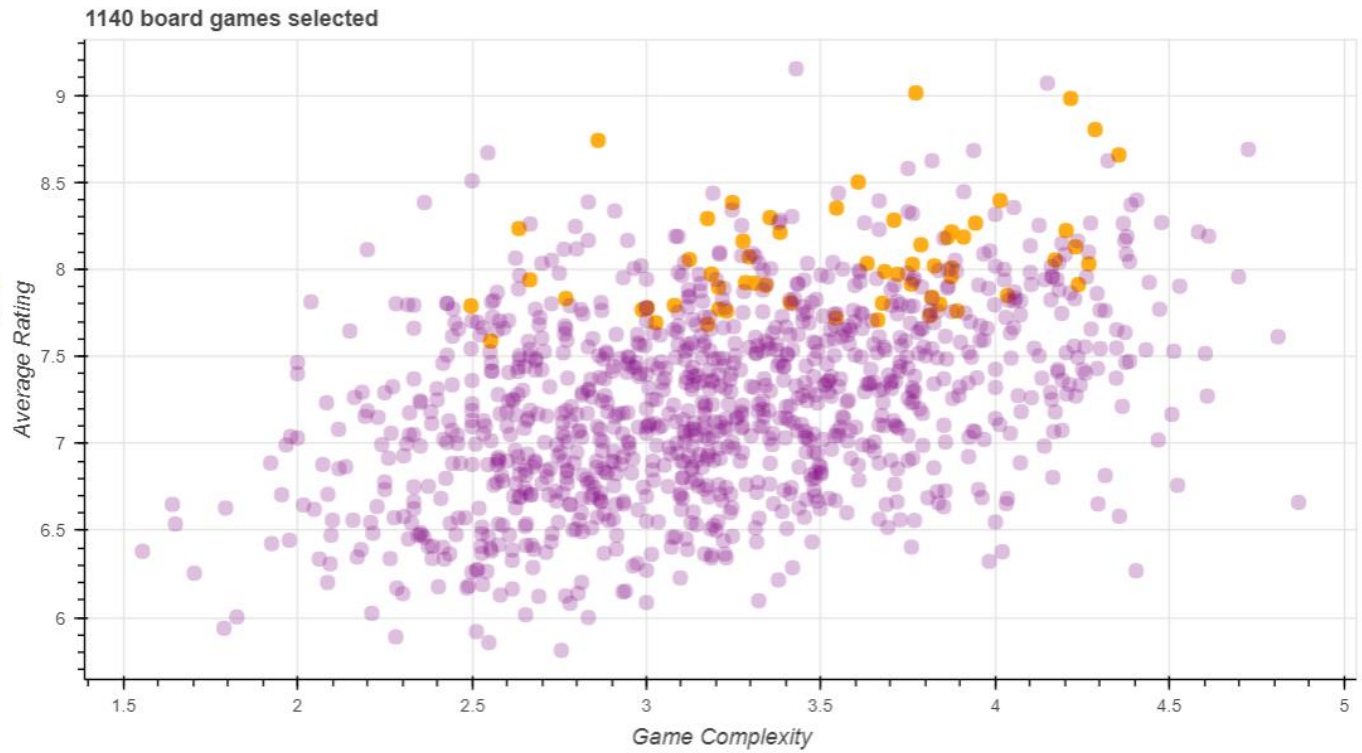
Average time for game completion (mins): **100**

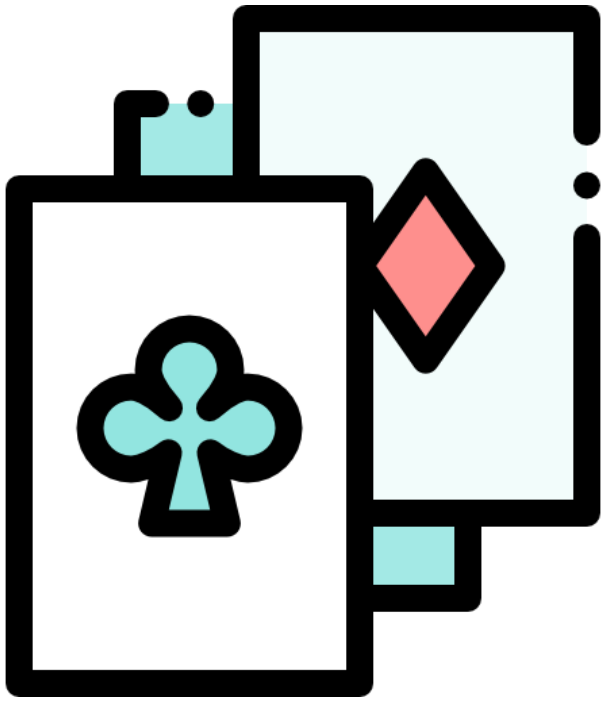
X Axis

Game Complexity

Y Axis

Average Rating

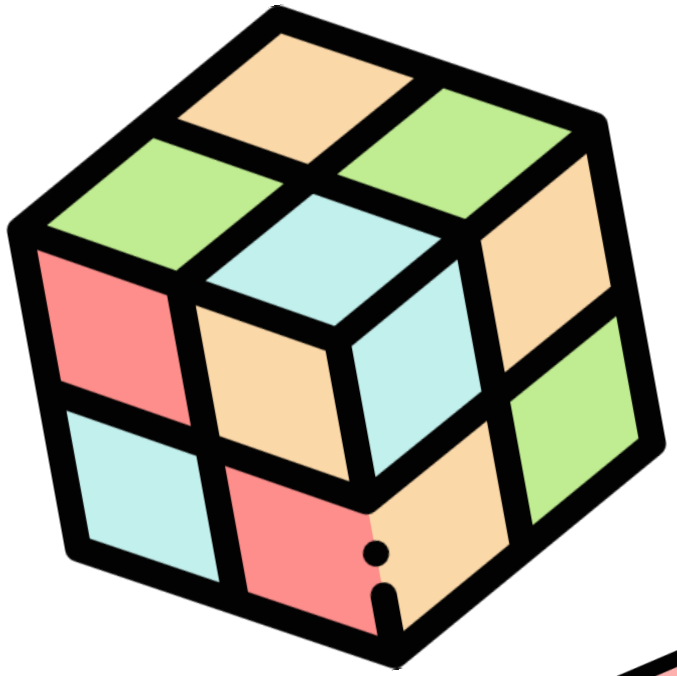


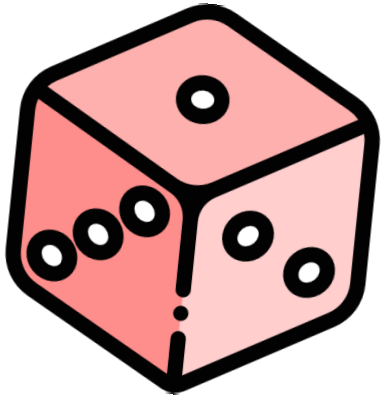


data & cleaning

our data

- Board Game Geek
- 5000 unique board games
- Average ratings vs. geek ratings
- Minimum/maximum players, average play time, category, mechanic, & weight/complexity



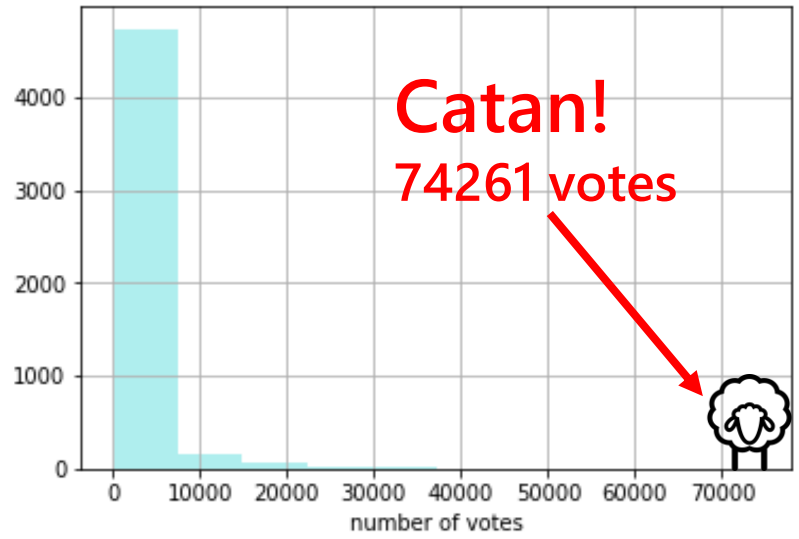


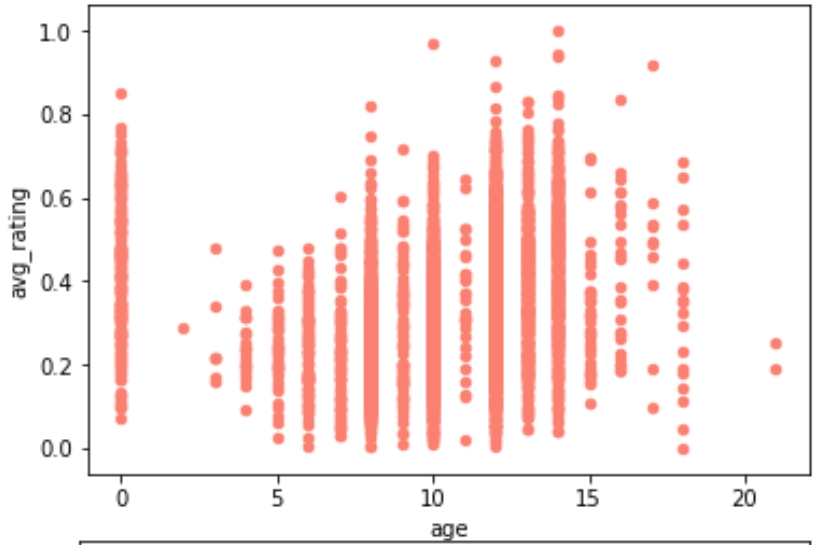
cleaning data

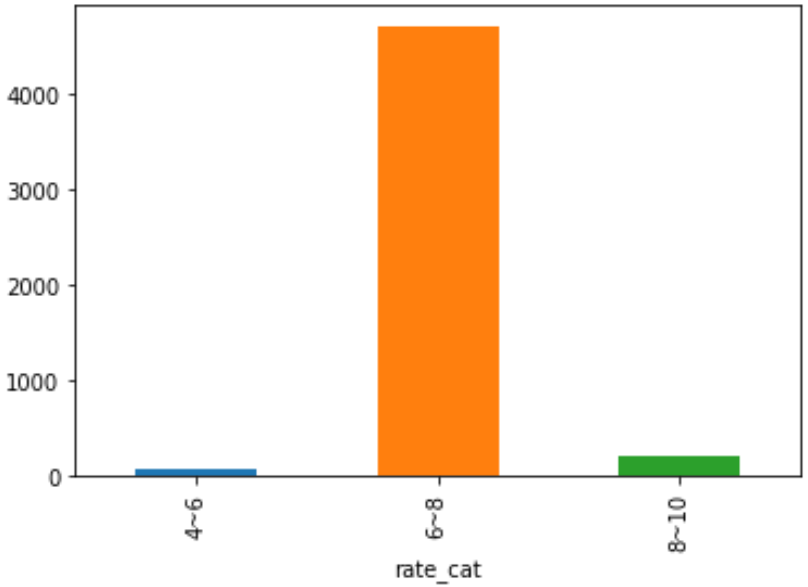
Cleaning

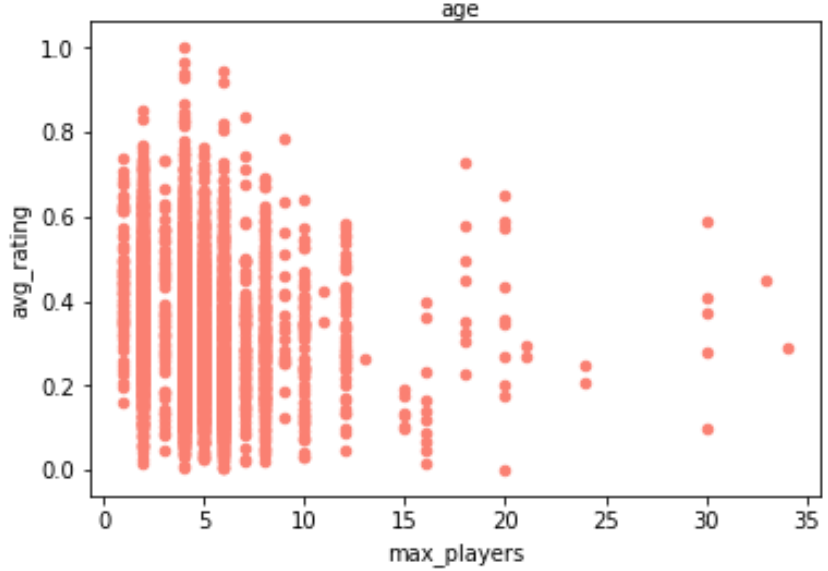
Normalization

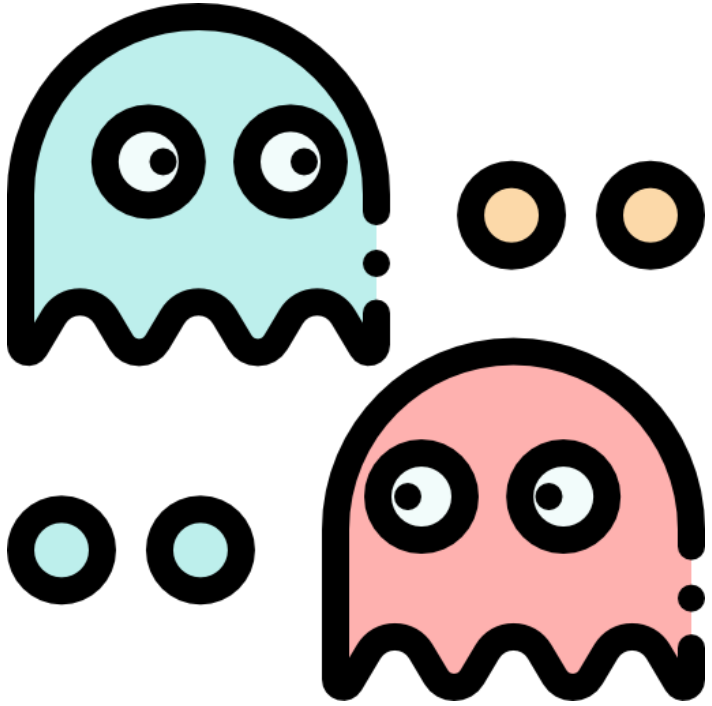
Categorization











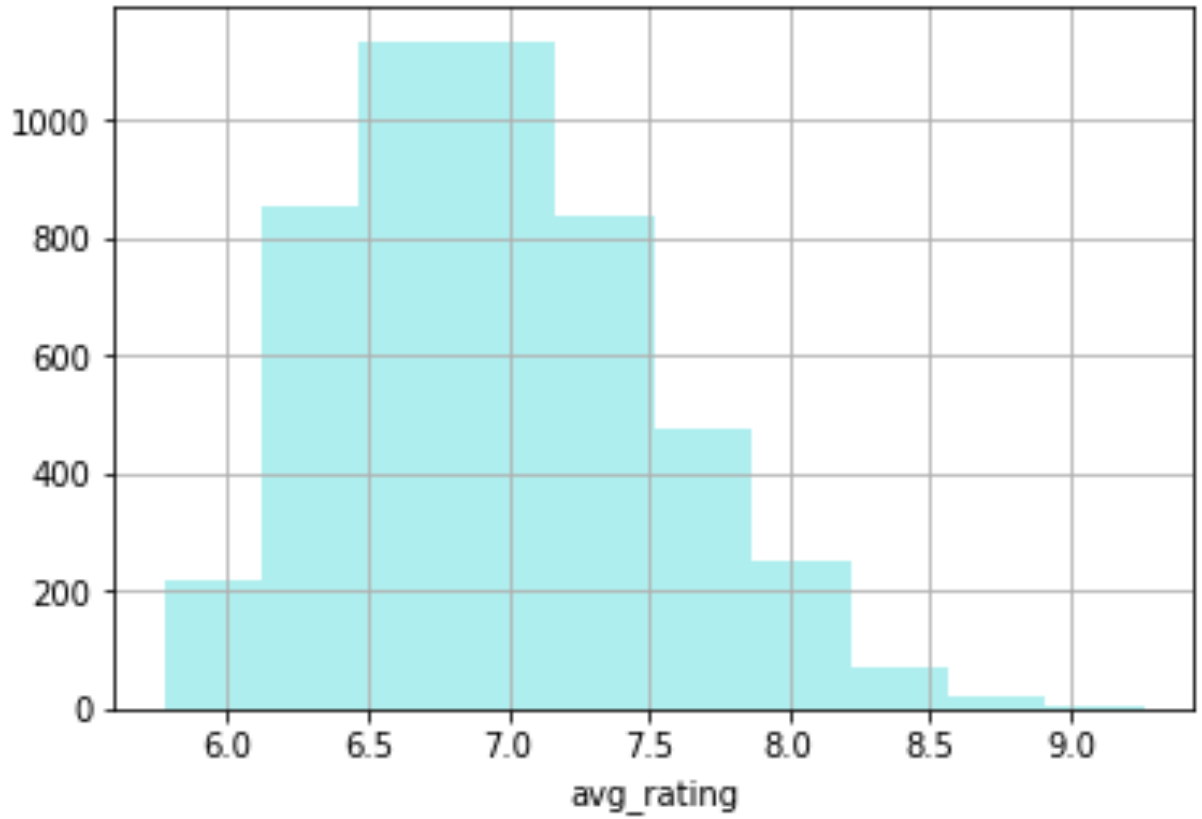
data analysis

the challenges of survey data

Average Rating:

- Range is 5.77 - 9.26
- Most people rate between 6.1 - 7.5

People are too polite!



what is NPS?

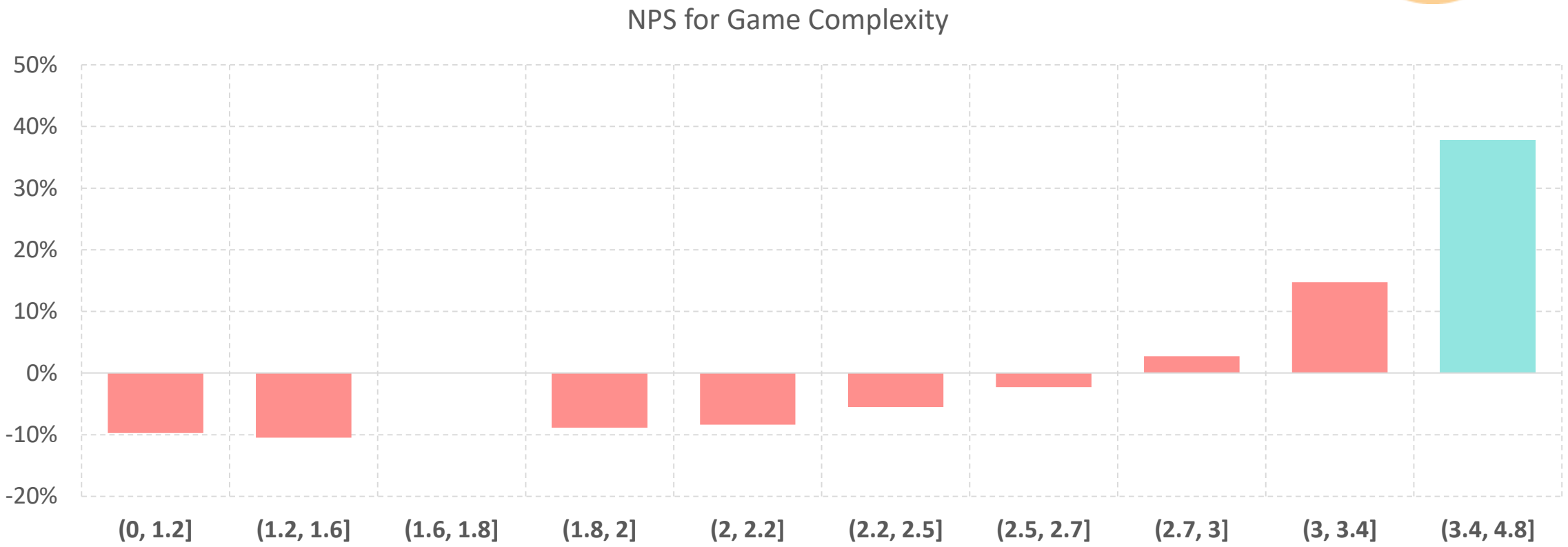
detractors
0 - 6
could damage company reputation

passives
7 - 8
somewhat satisfied, but switch easily

promoters
9 - 10
loves products, enthusiastic recommender

weight (complexity)

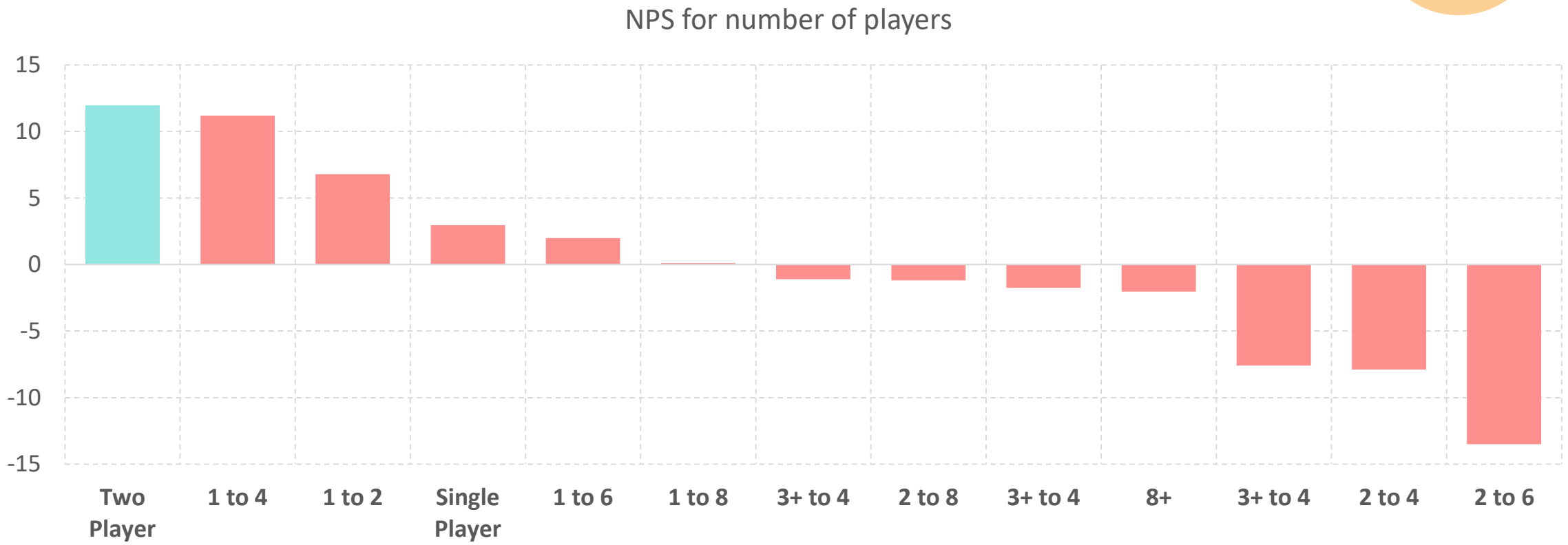
R - Square 29%



Complex games are popular

number of players

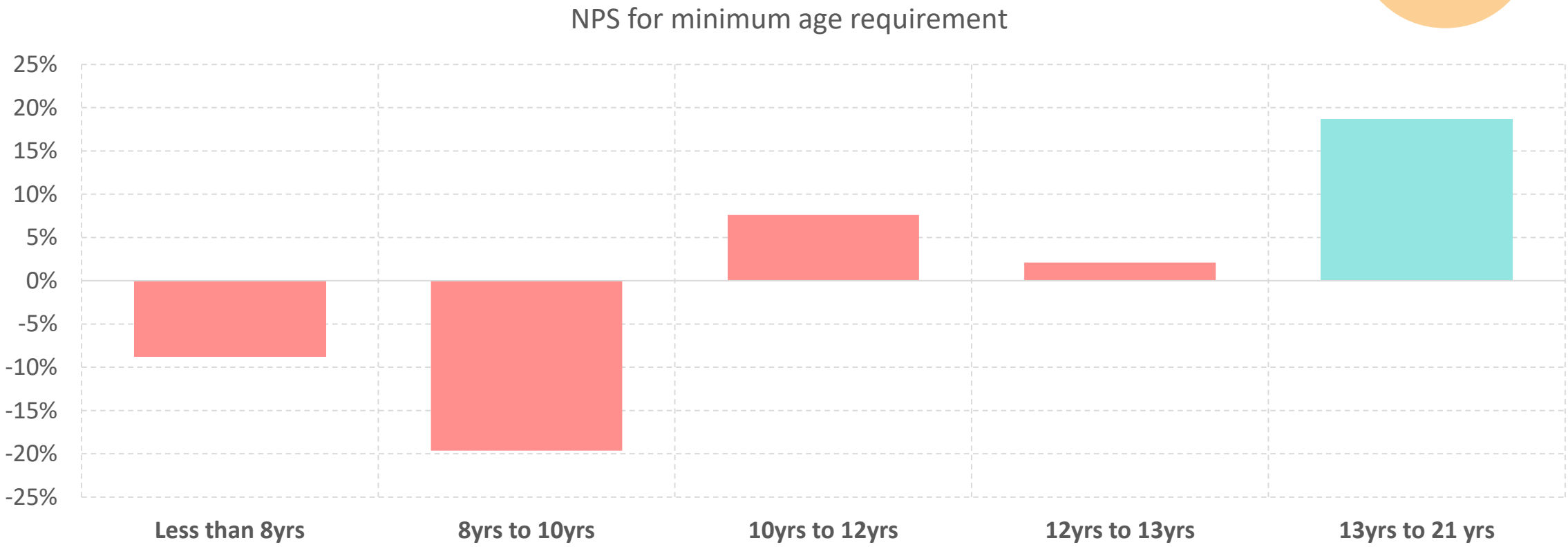
R - Square 7%



Two-player games are popular

age

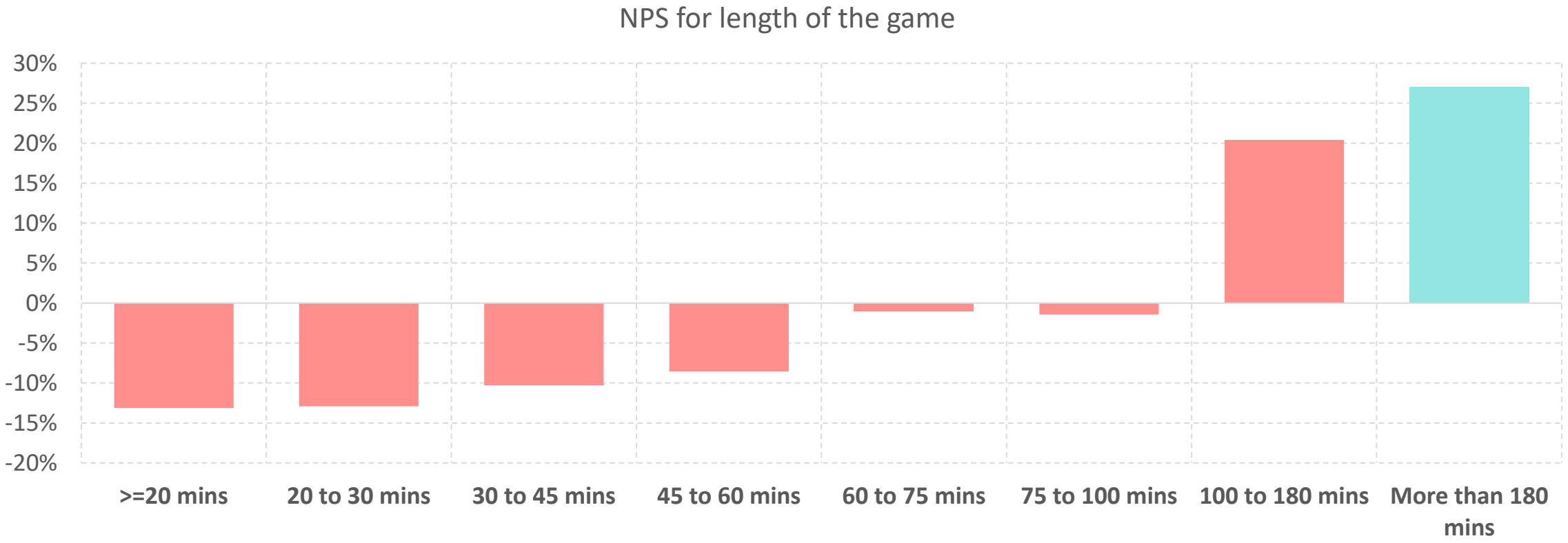
R - Square 14%



Board games are gaining popularity amongst mature audiences

average time

R - Square 14%



Longer board games are the most popular

categories

1. Wargame
2. Adventure
3. Modern Warfare
4. Aviation Flight
5. Economic

the designer

1. Dean Essig
2. John H Butterfield
3. Vlaada Chvatil
4. Adam Carlson
5. Gene Billingsley

prediction models

regression model

'avg_rating ~ weight +
age_category + avg_time'

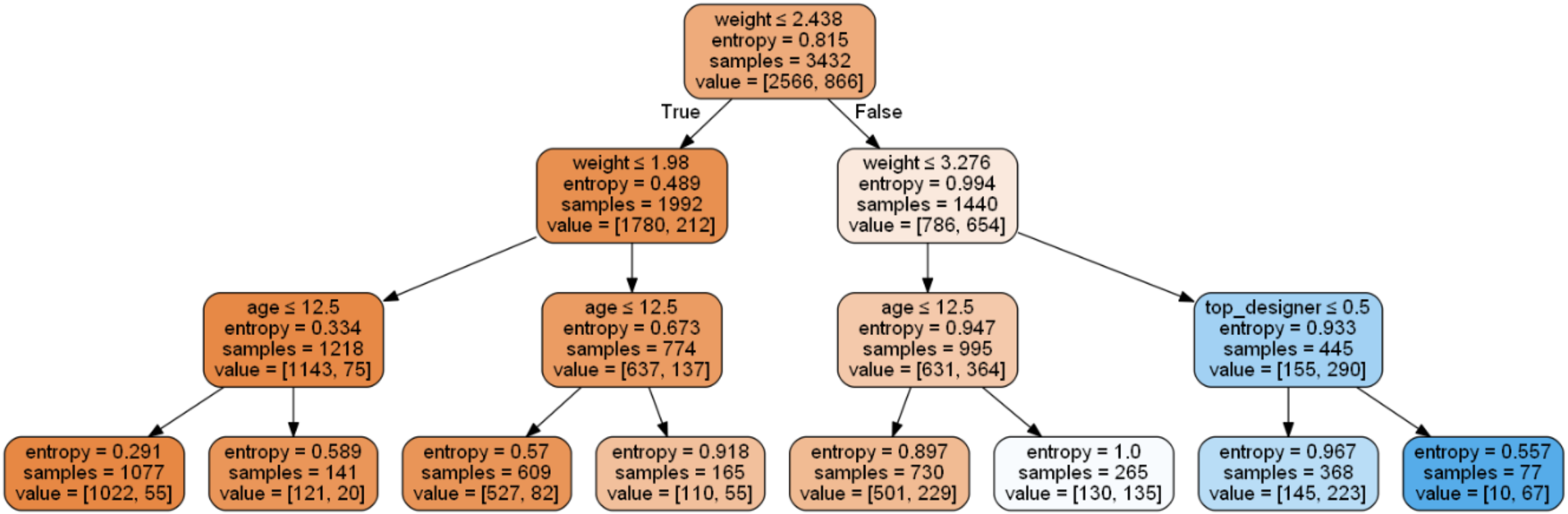
R-squared: 0.311

RMSE: 0.155

	coef	std err	t	P>|t|
Intercept	0.1292	0.008	15.727	0.000
age_cat[T.11~13]	-0.0373	0.007	-5.015	0.000
age_cat[T.13 above]	0.0221	0.008	2.904	0.004
age_cat[T.8~10]	-0.0420	0.007	-6.164	0.000
weight	0.0927	0.003	27.287	0.000
avg_time	0.0069	0.002	3.855	0.000

tree

Accuracy = 77%



thank you! questions?