

Qualities of a Higher-Rated Application on the Apple App Store

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The Flatiron School Online Data Science Self-Paced Bootcamp

Module 5 Final Project

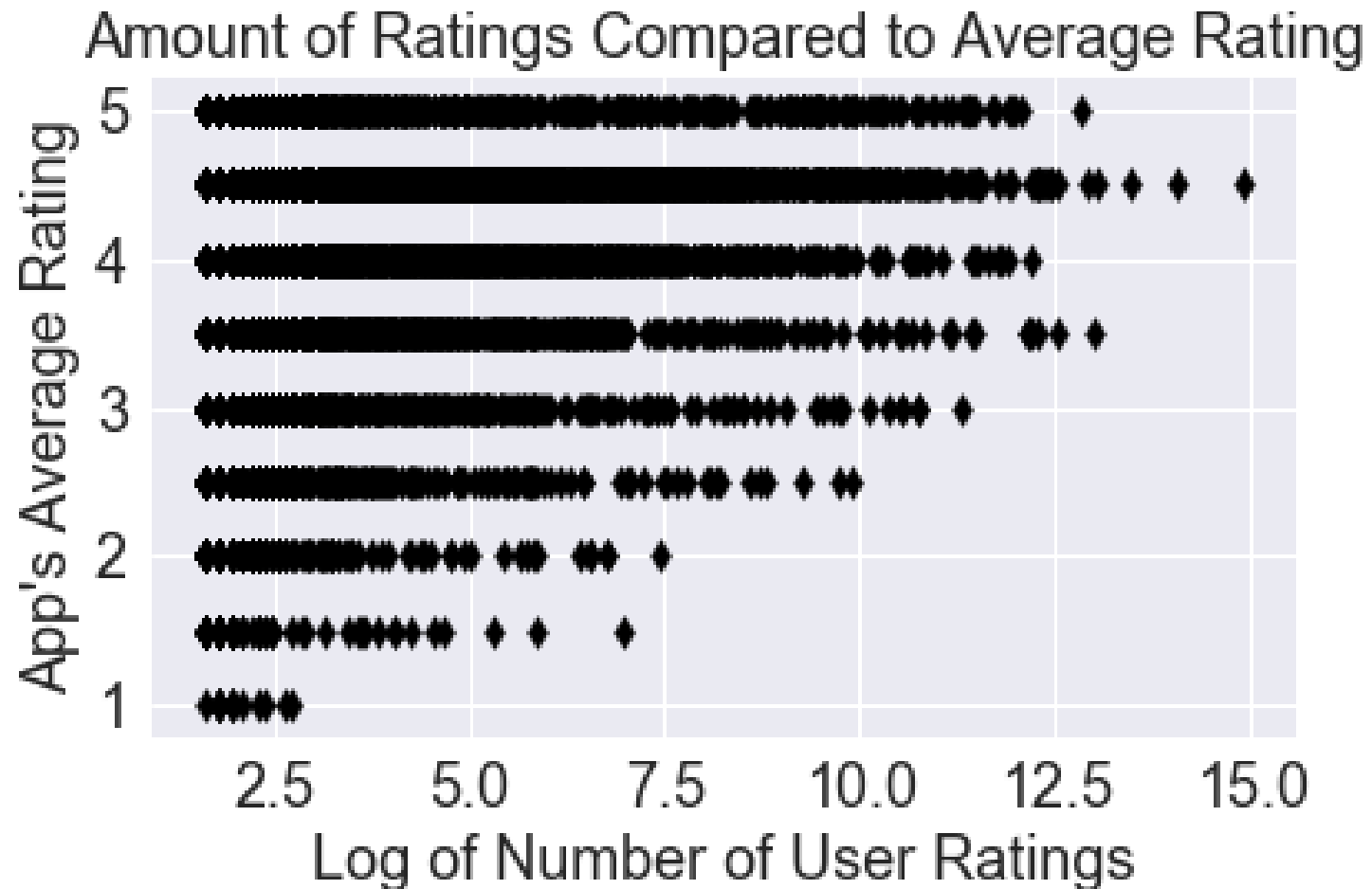
July 2020



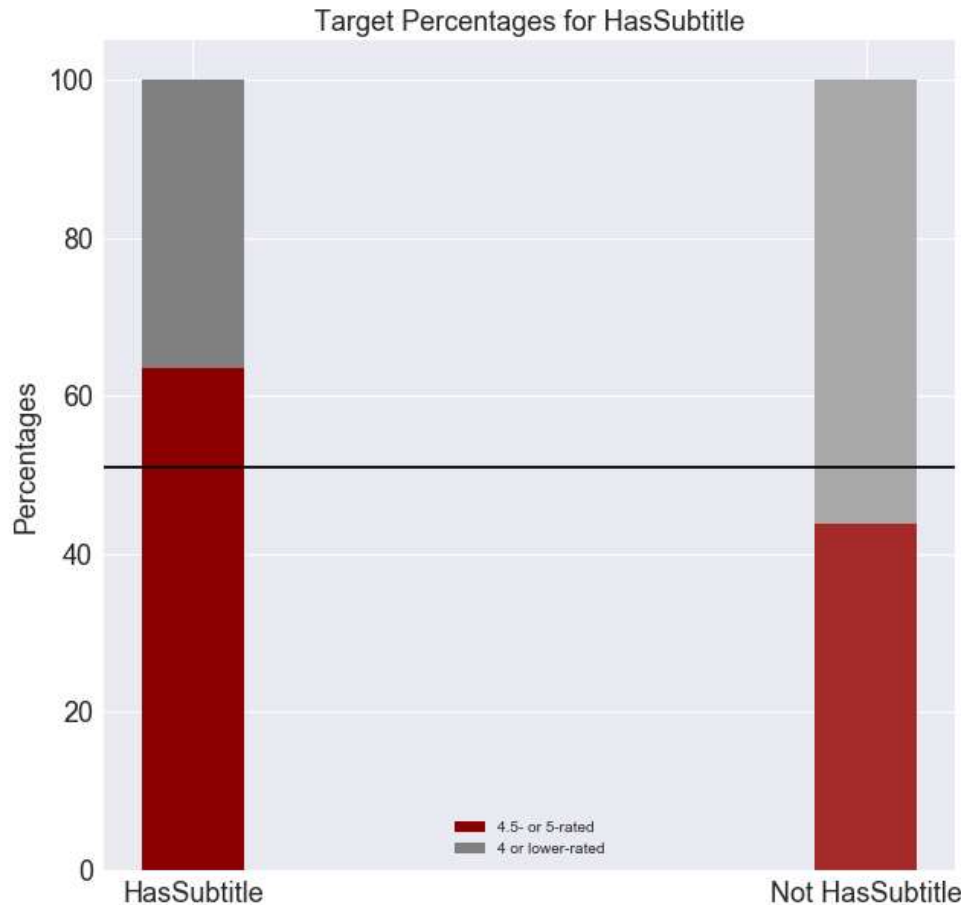
Qualities of Top Strategy Games

- ▶ There were eleven qualities taken into account to create the classifier.
- ▶ The six with the highest importance were:
 - The number of ratings of the app
 - Whether the app has a subtitle
 - The size of the application
 - The length of the description text
 - Whether the app is in the Simulation genre
 - Whether the app is in the Casual genre

Number of User Ratings

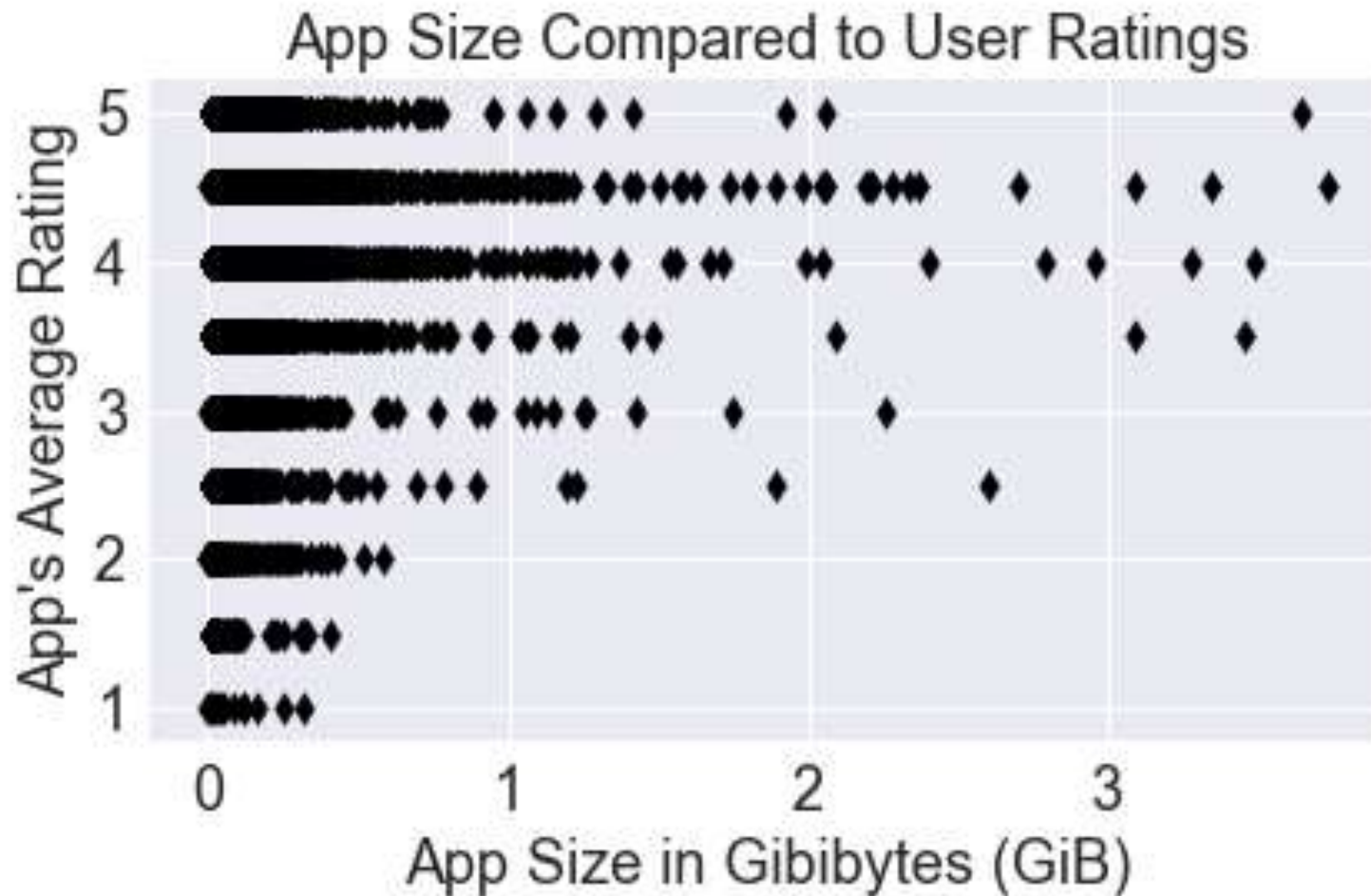


Whether the App Has a Subtitle



- ▶ With a subtitle:
 - Chess – tChess Pro
For beginners to professionals
 - Arcs
Circular puzzle game
- ▶ Without a subtitle:
 - Chess Genius
 - Color Sudoku

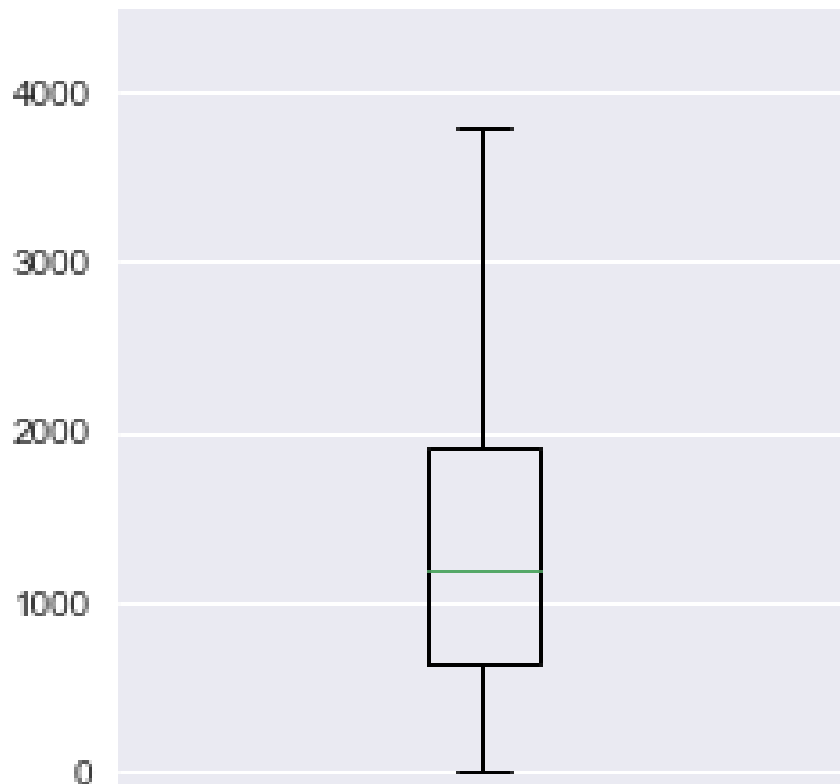
Size of an Application



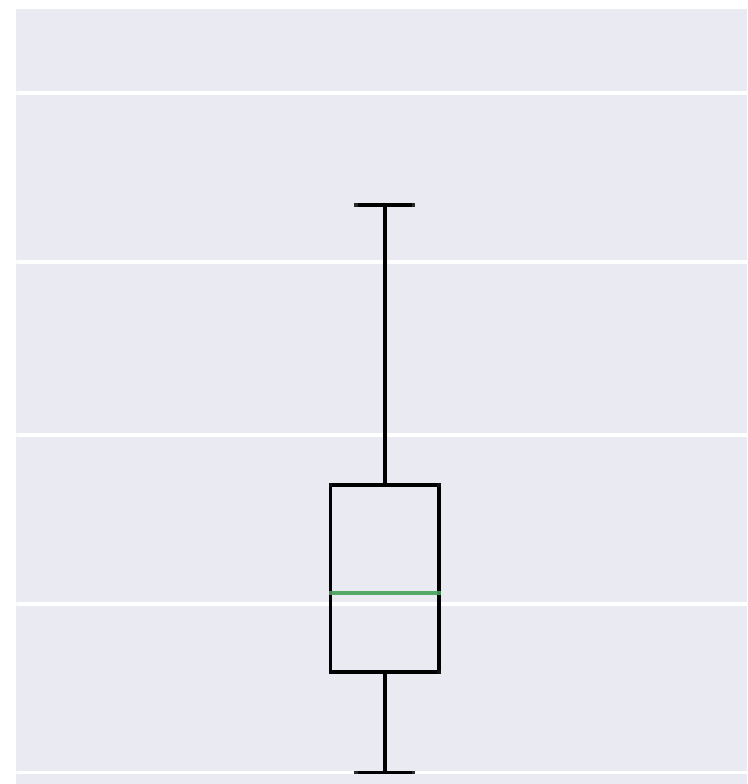
Length of Description Text

Description Lengths without Outliers

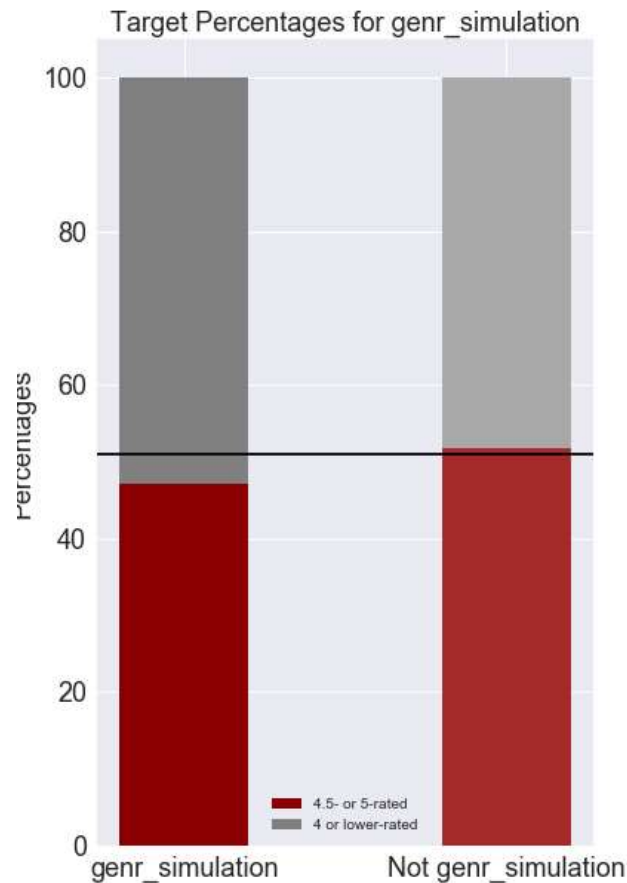
Higher-Rated



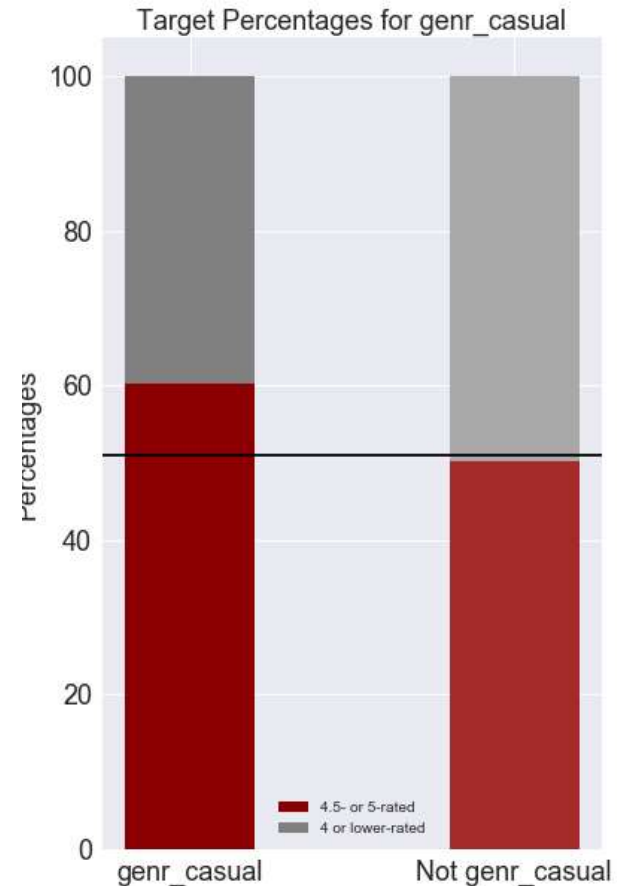
Lower-Rated



Relevant Genres



Simulation genre



Casual genre

Recommendations to Increase Average Rating

- ▶ Making the strategy game fall into the Casual genre
- ▶ Providing more descriptive text about the game (even just a Subtitle)
- ▶ Increase the number of users that rate the app

Further Areas of Interest

- ▶ Changes resulting from the 2014 decision to mark apps that cost 0.00 USD as “Get” instead of “Free”
- ▶ Analysis of the icon images
- ▶ Amount of advertising in a game
- ▶ Whether apps that have more users means more of them rate them highly

Thank You

- ▶ Comments can be addressed via the GitHub repository: <https://github.com/bronwenc/Module-5-Project>
- ▶ Dataset credit:
<https://www.kaggle.com/tristan581/17k-apple-app-store-strategy-games> made available with a Creative Commons Attribution 4.0 International (CC BY 4.0) License

Thanks to Jeff Herman and the rest of the Flatiron/Learn.co Data Science team.

Other “Important Features”

- ▶ Having this feature is more common for higher-rated apps

7. Whether at least one in-app purchase cost \$1.99 or \$1.49 USD
10. Whether the app supports the Japanese language
11. Whether at least one in-app purchase cost more than \$1.99 but less than \$19.49 USD

Positive Correlation

- ▶ Not having this feature is more common for higher-rated apps

8. A longer name of the app (in total characters)
9. Whether the app fell into the Entertainment genre

Negative Correlation

Lessons Learned

- ▶ Detours can be time-consuming
- ▶ Asking for advice can be motivating
- ▶ Allowing for a few more options for a function can be beneficial for future analysis
- ▶ If it feels as though a simpler way should exist, it is worth checking whether it does exist

AdaBoostClassifier Model

- ▶ The highest accuracy achieved was 64%.
- ▶ Using an Adaptive Boost model:
 - base: DecisionTreeClassifier with max_depth of 1
 - estimators: 75 was the maximum number of estimators at which boosting stopped
 - learning rate: the contribution of each classifier was shrunk by 0.25
 - algorithm: used the SAMME.R real boosting algorithm
- ▶ The learning rate and estimators have a trade-off