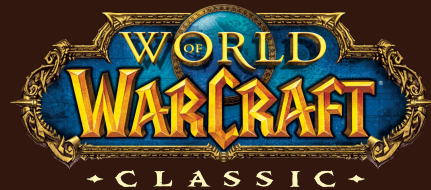


WORLD WARCRAFT



15 Years Later...



Originally released in 2004

7 Expansions

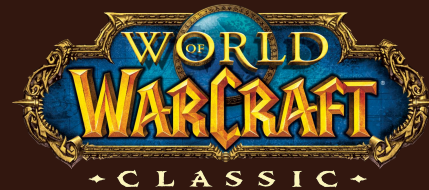
WoW: Classic was re-released in 2019

By the end of the year subscribers had more than doubled

Over 2 million new characters created at launch



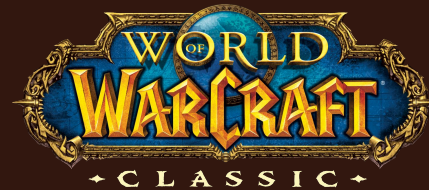
Can we come up with ways to keep players interested in a game they been playing for so long.



- Nostalgia
- Dynamic Scaling Difficulty
- Diversity of Gameplay



Onyxia



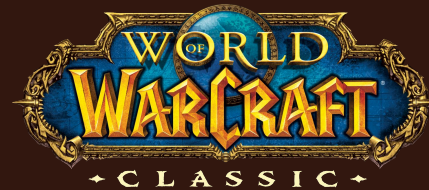
40 person raid boss

A high difficulty enemy

Offers great rewards if defeated

Requires some strategy and group coordination

Data used for analysis



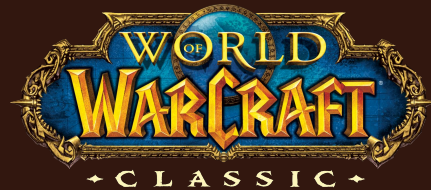
Warcraftlogs provides in game accounts of groups attempting to defeat a raid boss.

Over 4000 logs from this year from all regions.

Filtered out groups that did not finish the fight.

Looking to predict total fight time based on information that can be obtained before the fight begins.

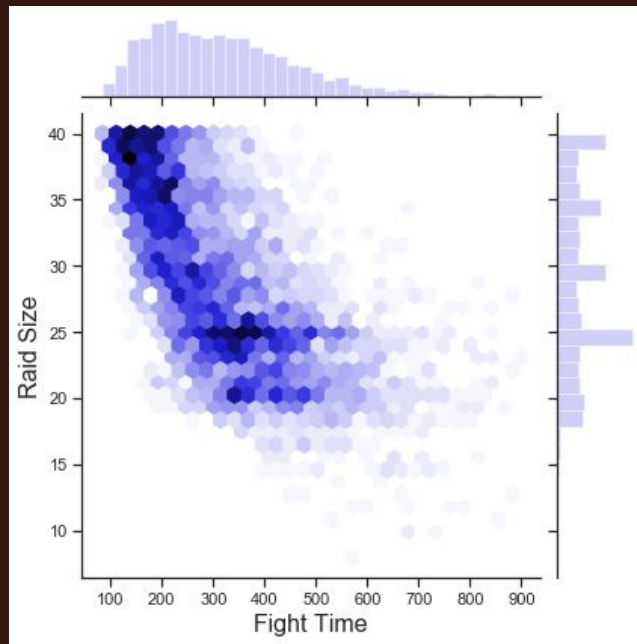
An overview of the data and what we can learn.



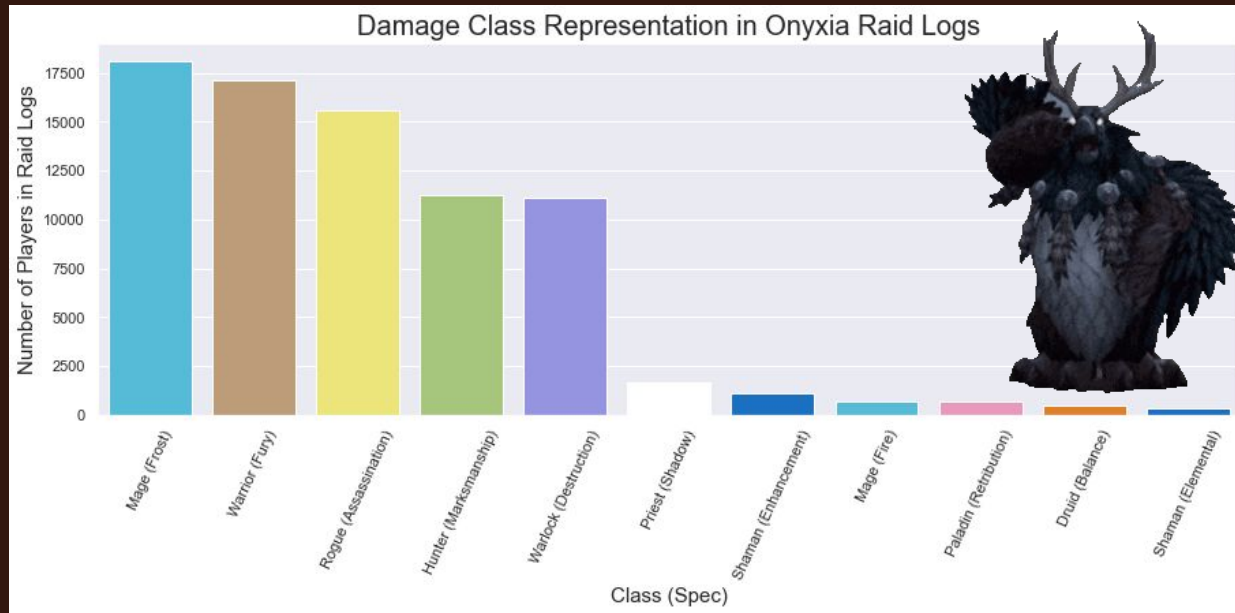
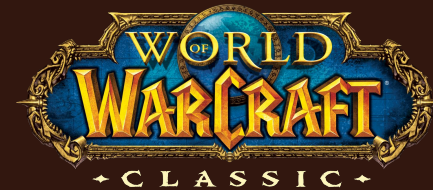
The dataset has been trimmed to fights under 15 minutes.

The average fight lasts about 5 and a half minutes.

The average group runs about 29 people with large clusters at 40,35,30 and 25.

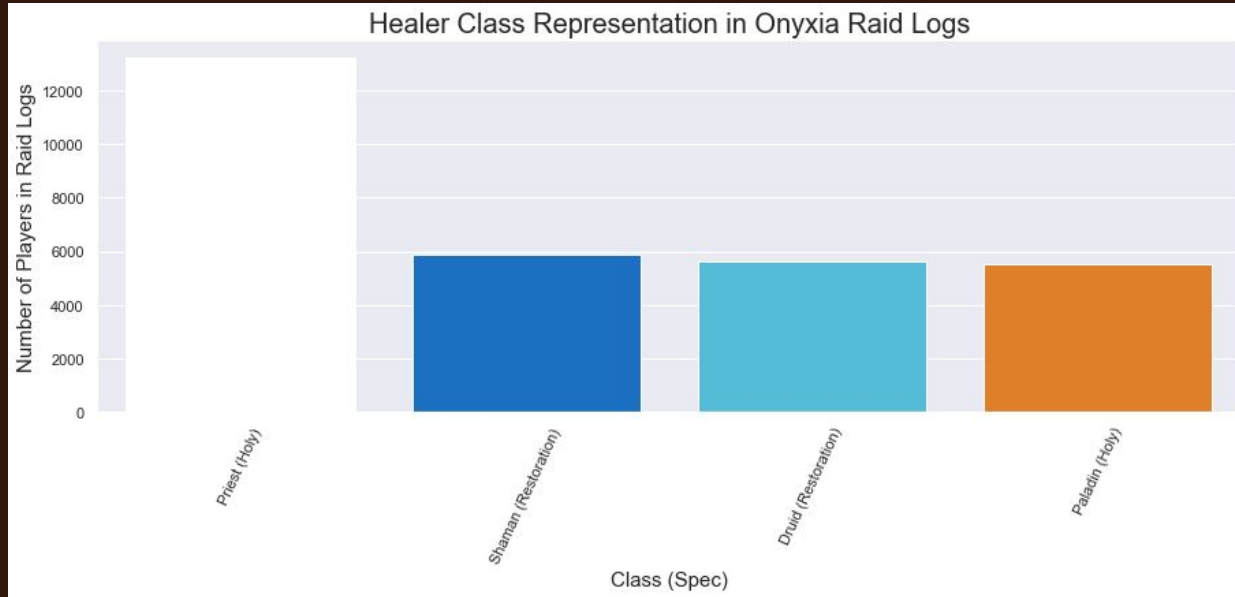


Are players able to enjoy the game the way they want?



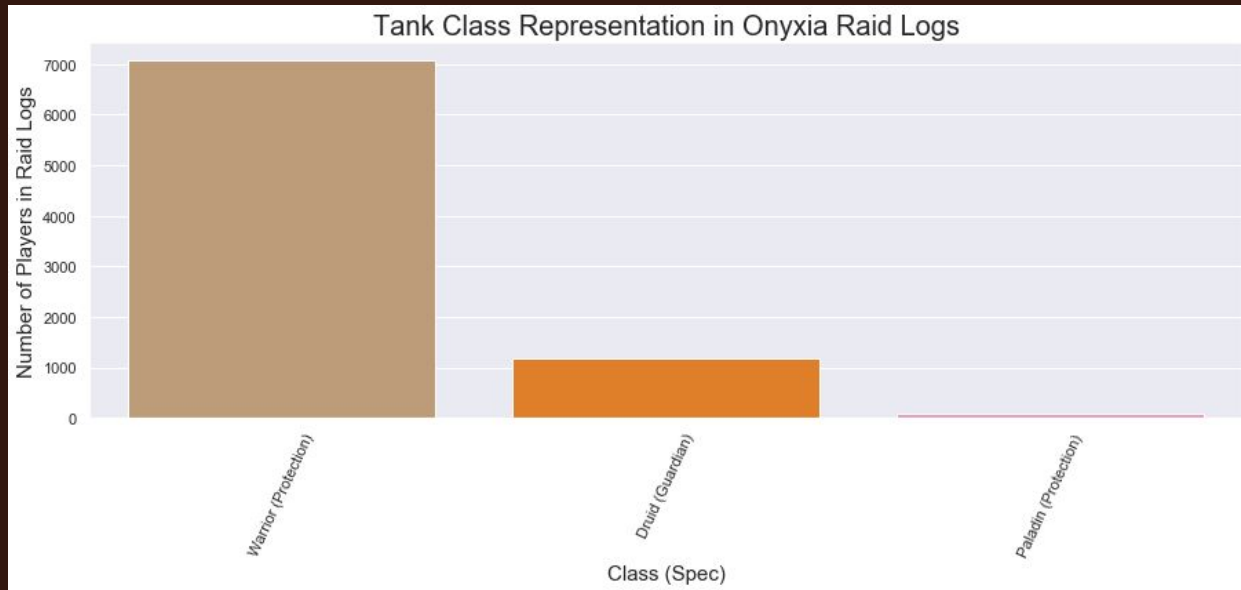
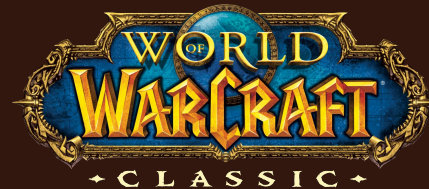
That depends...

The situation for healing classes is much less grim.



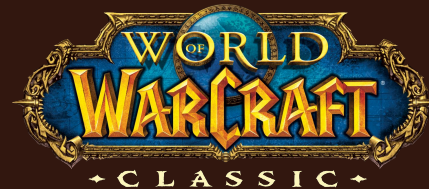
Priests are specifically useful in this fight.

Players who enjoy the tanking role in groups are largely forced into the warrior class.

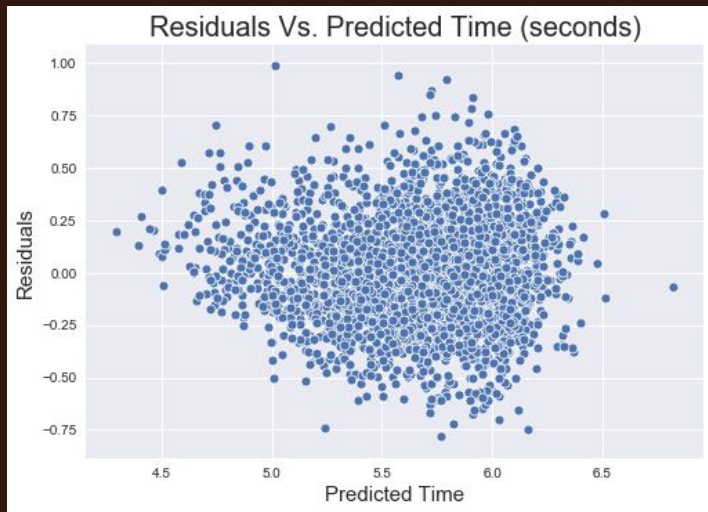


No fun allowed.

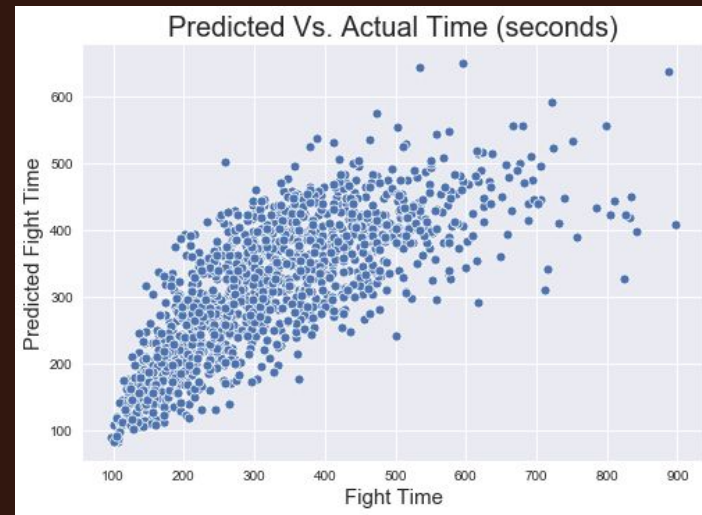
Building a model to predict how long a given group will take to defeat Onyxia.



Some issues of Heteroscedasticity



Median Absolute Error: ~46s



Some suggestions for improving model performance.

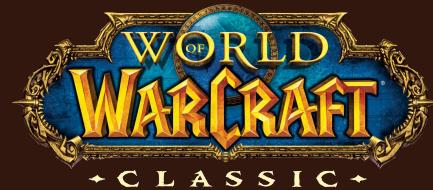


Additional in-game data

More data storage capacity

More robust model for non-linear relationships

How can this inform game design in the future and allow for more enjoyable game play?



Consider using these types of models for content scaling.

- Dynamic scaling of raid boss difficulty and reward can add replayability.
- Incorporating additional fight mechanics as groups trivialize content can also help achieve this.

Class imbalances in power leads to less gameplay diversity.

- Consider adjusting the relative power of certain classes relative to others.
- Boss mechanics that encourage having certain classes in your group can help underrepresented classes.