

VALAR
MORGHULIS

A
GAME OF THRONES
DEATH PREDICTOR

BY MONICA RAMIREZ



WARNING!
This presentation may
contain Spoilers

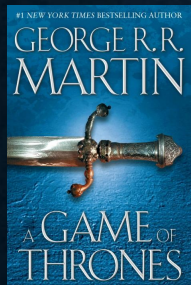
VALAR MORGHULIS

A GAME OF THRONES DEATH PREDICTOR

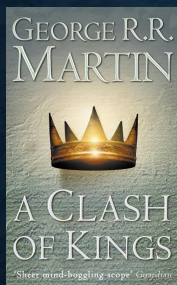
BY MONICA RAMIREZ

CONTEXT

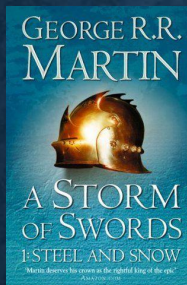
Book 1



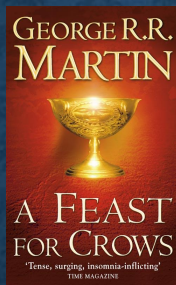
Book 2



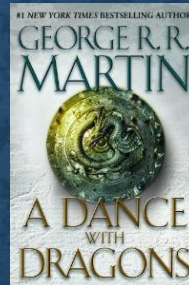
Book 3



Book 4



Book 5

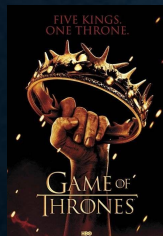


Training / Test

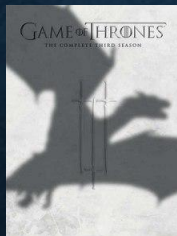
Predict



Season 1



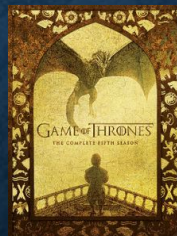
Season 2



Season 3



Season 4



Season 5



Season 6



Season 7

GAME OF DATA



ASSUMPTIONS



Characters don't come back to life (Target value: 'Alive')

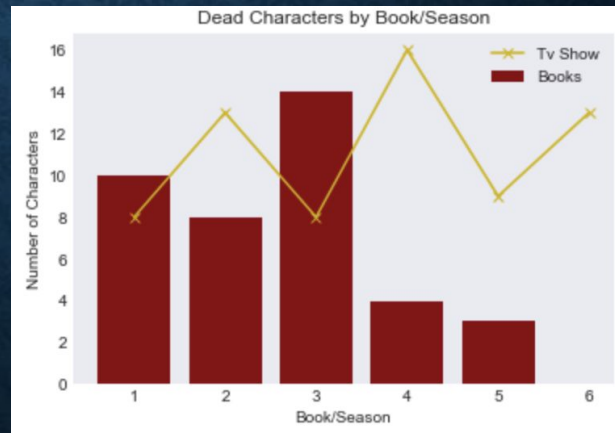
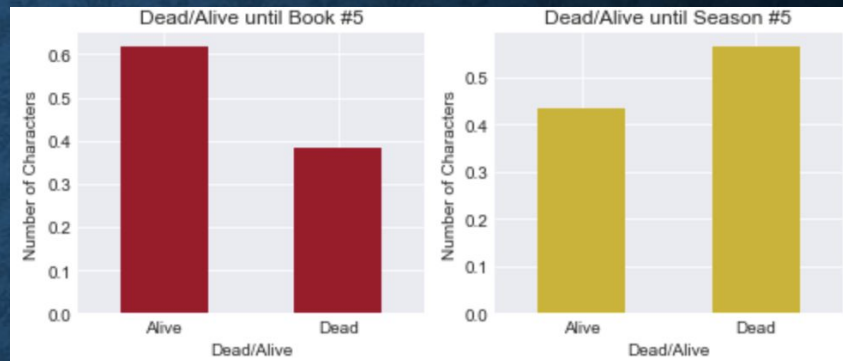
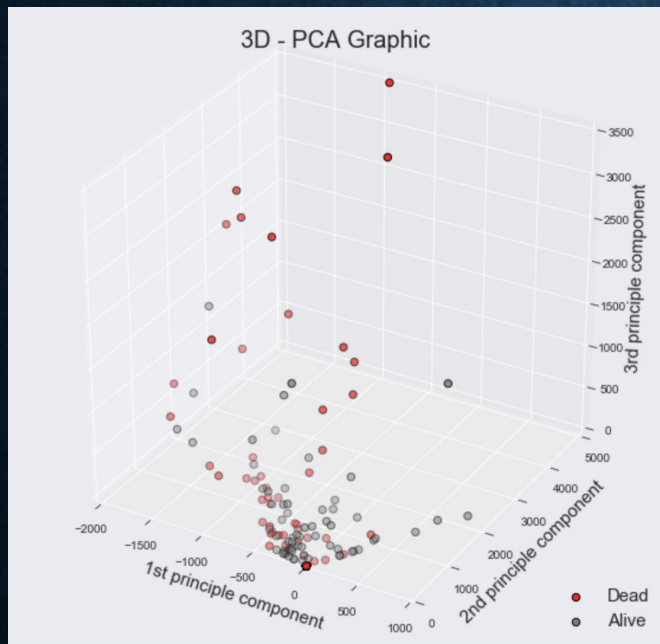


Dataset only includes human characters (NOT dragons, direwolves, White Walkers or Children of the Forest)



Characters are only classified in the top 10 houses with more members on it (Otherwise house='Other')

YOU KNOW NOTHING



I MODEL AND I KNOW THINGS

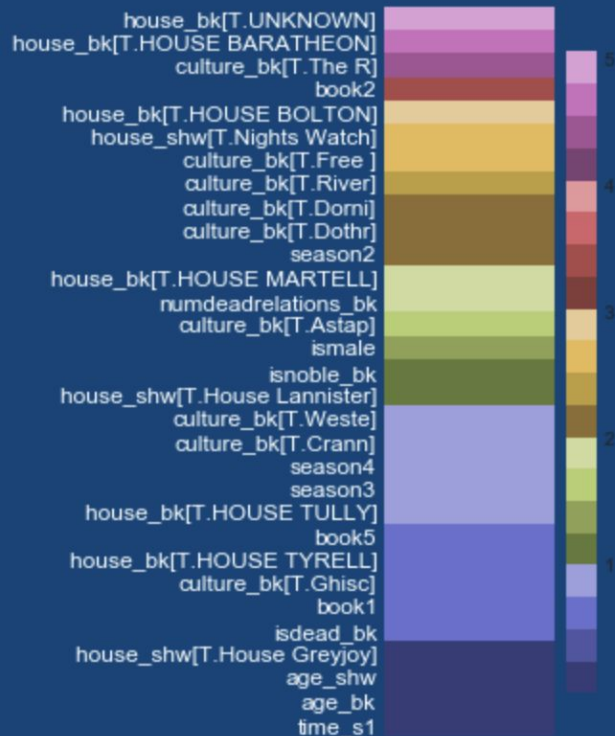
BEST MODEL SHOW: LOGISTIC REGRESSION (BALANCED)

C Parameter: 100
Test Accuracy: 80%
Precision: 70%
Recall: 75%
F1-score: 74%
Threshold: ~ 60%

Interesting:

- Wildling = 0
- Targaryen < 0
- Stark < 0
- Popularity Book < 0

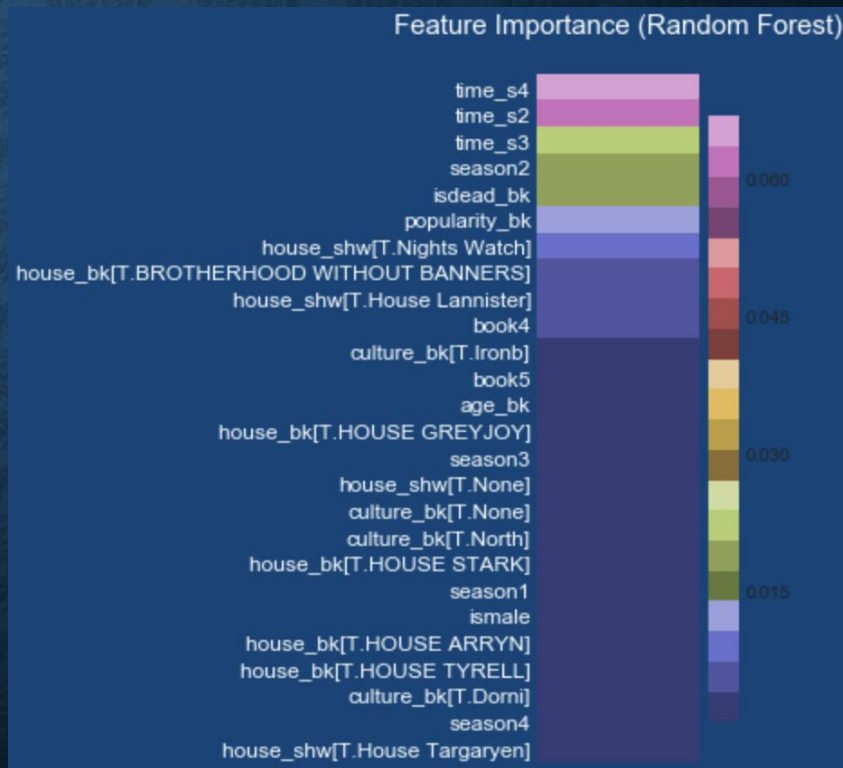
Feature Coefficients (Logistic Regression - Balanced)



I MODEL AND I KNOW THINGS

BEST MODEL: RANDOM FOREST (GRID SEARCH)

Depth: 5
Test Accuracy: 98%
Precision: 71%
Recall: 75%
F1-score: 73%
Threshold: ~ 30%



VALAR MORGHULIS

[LINK TO THE FLASK APP!](#)

CREDITS



Kaggle Competition (<https://www.kaggle.com/mylesoneill/game-of-thrones>)



Visual Analysis raw data (<https://trumpexcel.com/game-of-thrones-dashboard/>)



Tv Show GitHub project (<https://github.com/mneedham/neo4j-got/blob/master/data>)



Game of Thrones Tv show Wiki (http://gameofthrones.wikia.com/wiki/Game_of_Thrones_Wiki)



Song of Ice and Fire Books Wiki (https://awoiaf.westeros.org/index.php/Main_Page)

THANK YOU



MONICA RAMIREZ

Blog: monitarb.github.io

Projects GitHub Repo:

https://github.com/monitarb/first_projects/tree/master/P3_GOTDeathProbability

2018