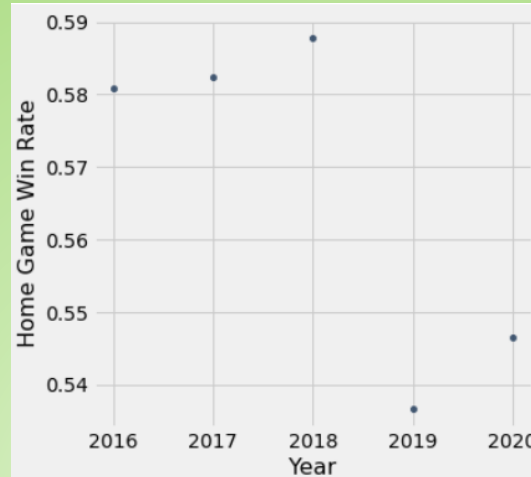


ANALYZING NBA GAME STATISTICS

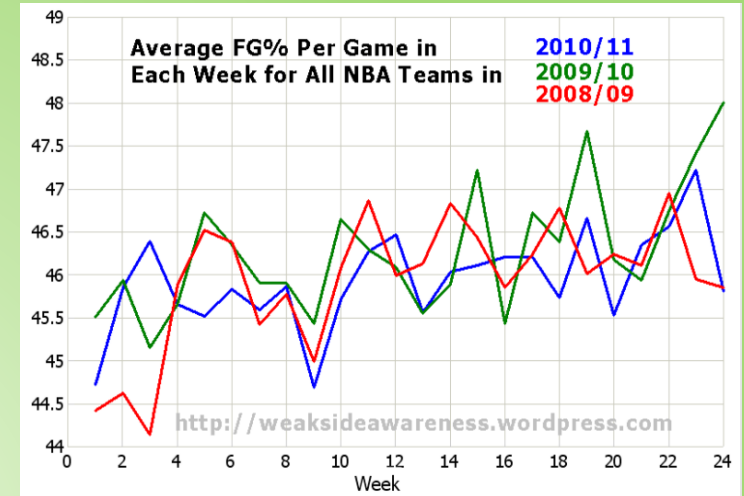
DIGHUM 100 - Theory and Methods in Digital Humanities by Dr. Adam G. Anderson || Kenneth Mao || May 30, 2021

Research Questions:

- (Primary) Is it possible to predict which team will win from previous data?
- What makes a team win? Is it the All-star players, familiarity among players, or any other factors?
- Is home court advantage real?
- Does the amount of experienced players increase the chances of winning?



Average Overall Home Game Win Rate for the Past 5 years



Average Field Goal Percentage per Game for Each Week in 2008 to 2010

PROCESS:

- 1) Obtain accurate NBA statistics, best if in .csv format.
 - 2) Upload files to Jupyter Notebook Domain.
 - 3) Set up Jupyter Notebook.
 - 4) Data cleaning.
 - 5) Sort data to look for trend and pattern.
 - 6) Possible analysis: - change of statistics of specific teams over time
- use of t-test to check if homecourt advantage exist
- change of statistics mid-season after player trade
 - 7) Plot data to look for trend and pattern.
 - 8) Use result to come up with an hypothesis.
- If possible: create a system to predict if a team will win.

References

- 1) .csv files with all the NBA Statistics from 2004 to 2020 seasons: <https://www.kaggle.com/nathanlauga/nba-games>
- 2) Inspiration of using NBA data for poster: Poster by Edress Gul from Summer 2020
- 3) Source of the average Field Goal percentage graph: <https://weaksidawareness.wordpress.com/2012/01/12/how-aggregate-nba-stats-change-through-season/>
- 4) Reference for setting up Github: https://github.com/AshQTan/DH100/blob/main/DH100_demo.ipynb
- 5) References of datascience functions: <http://data8.org/sp21/python-reference.html>