Predicting outcomes of soccer matches

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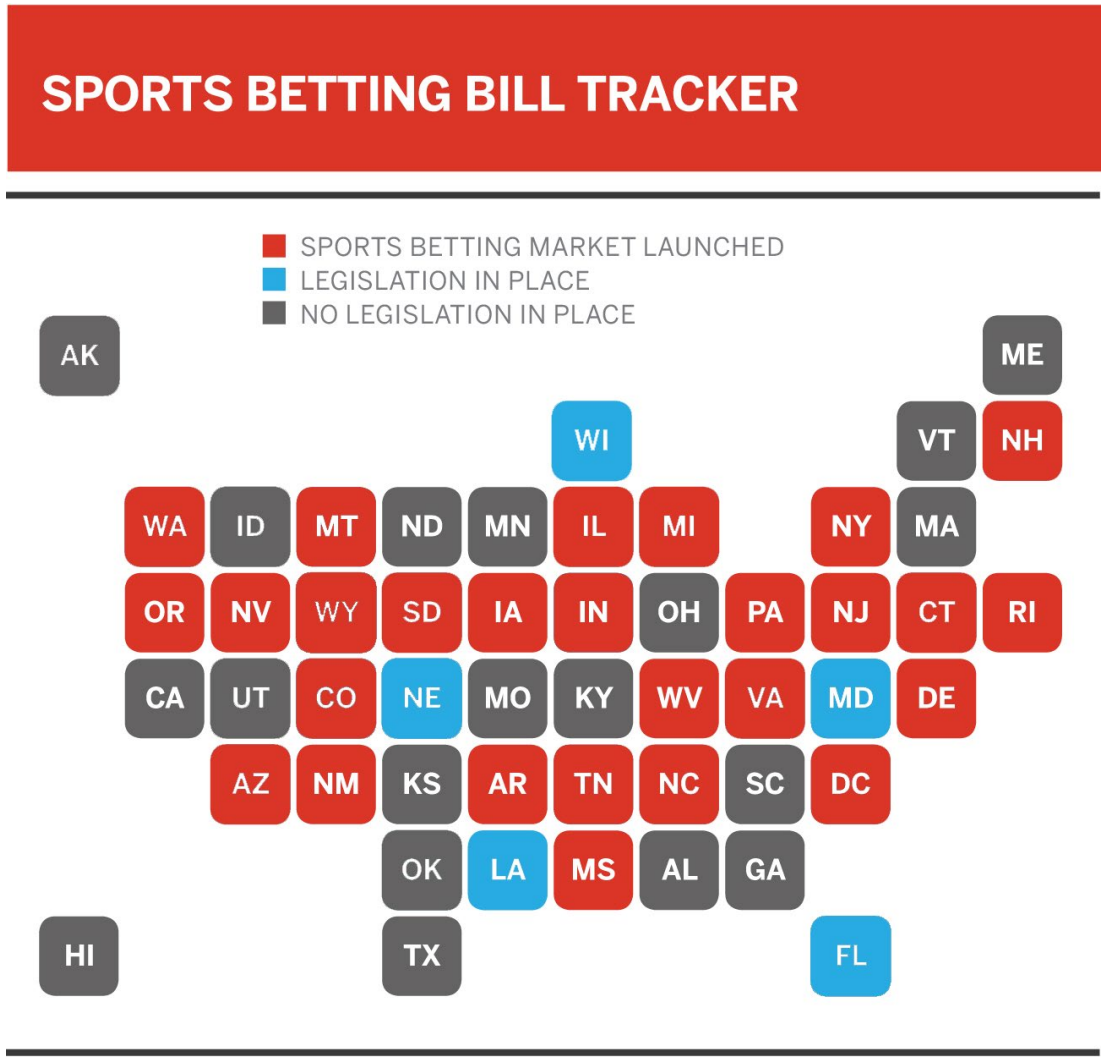
Motivation and wider scope

- It is human nature to predict the outcome based on information available in the past.
- As a regular follower of the premier league, I like to predict the position my team will likely finish before every season. Then, before every match, I want to predict the outcome among friends, and if you can get the prediction correctly, you have the bragging rights or can win the bets among friends.
- Betting on sports events is based on a guess about the future match outcome.
- Development of statistical models to improve decision-making is of interest to both bettors and odd setters

[1]


SPORTS BETTING BILL TRACKER
SPORTS BETTING MARKET LAUNCHED
LEGISLATION IN PLACE
NO LEGISLATION IN PLACE
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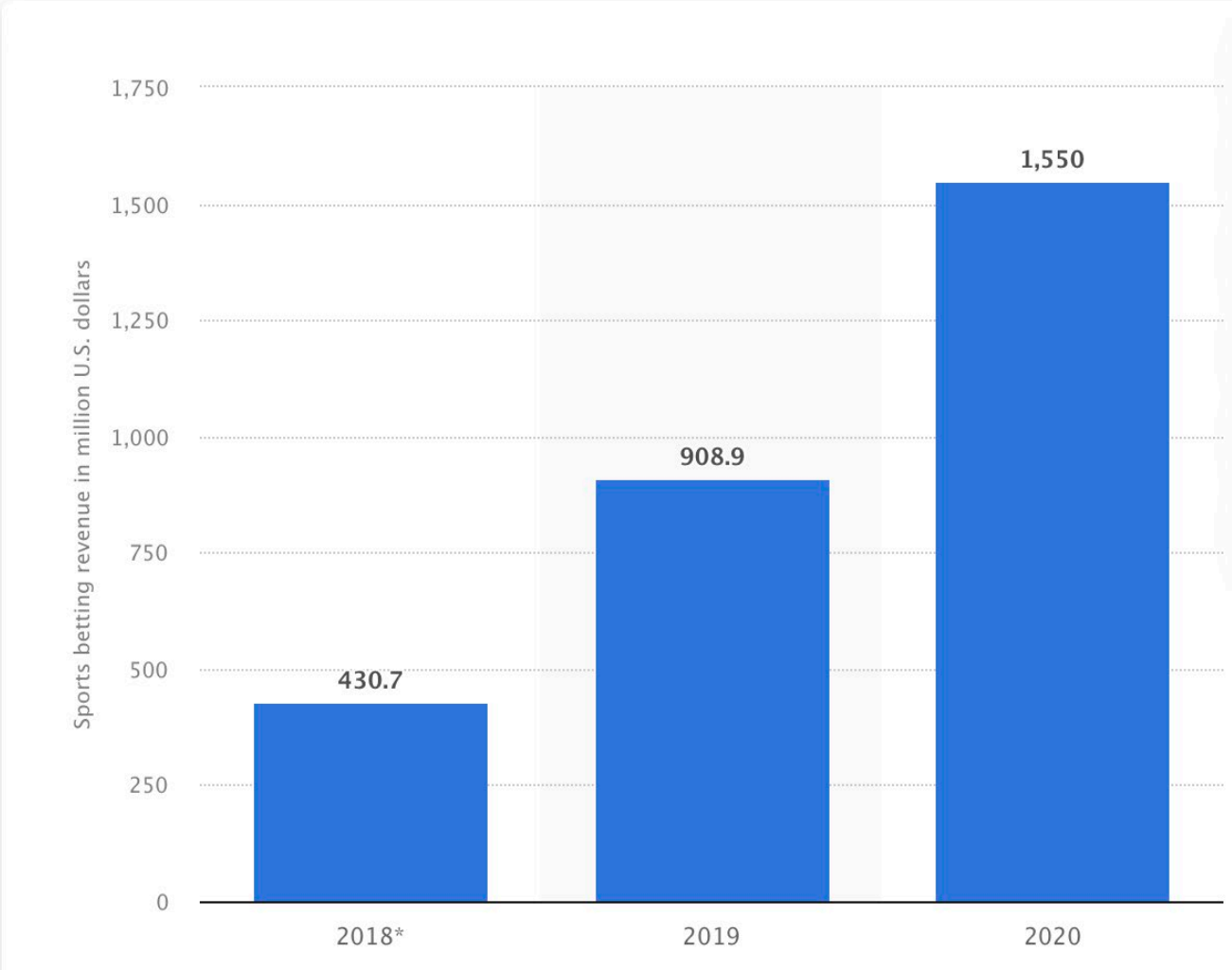
[2]


Sports betting revenue in million U.S. dollars
1,750
1,500
1,250
1,000
750
500
250
0
430.7
908.9
1,550
2018*
2019
2020

Data collection

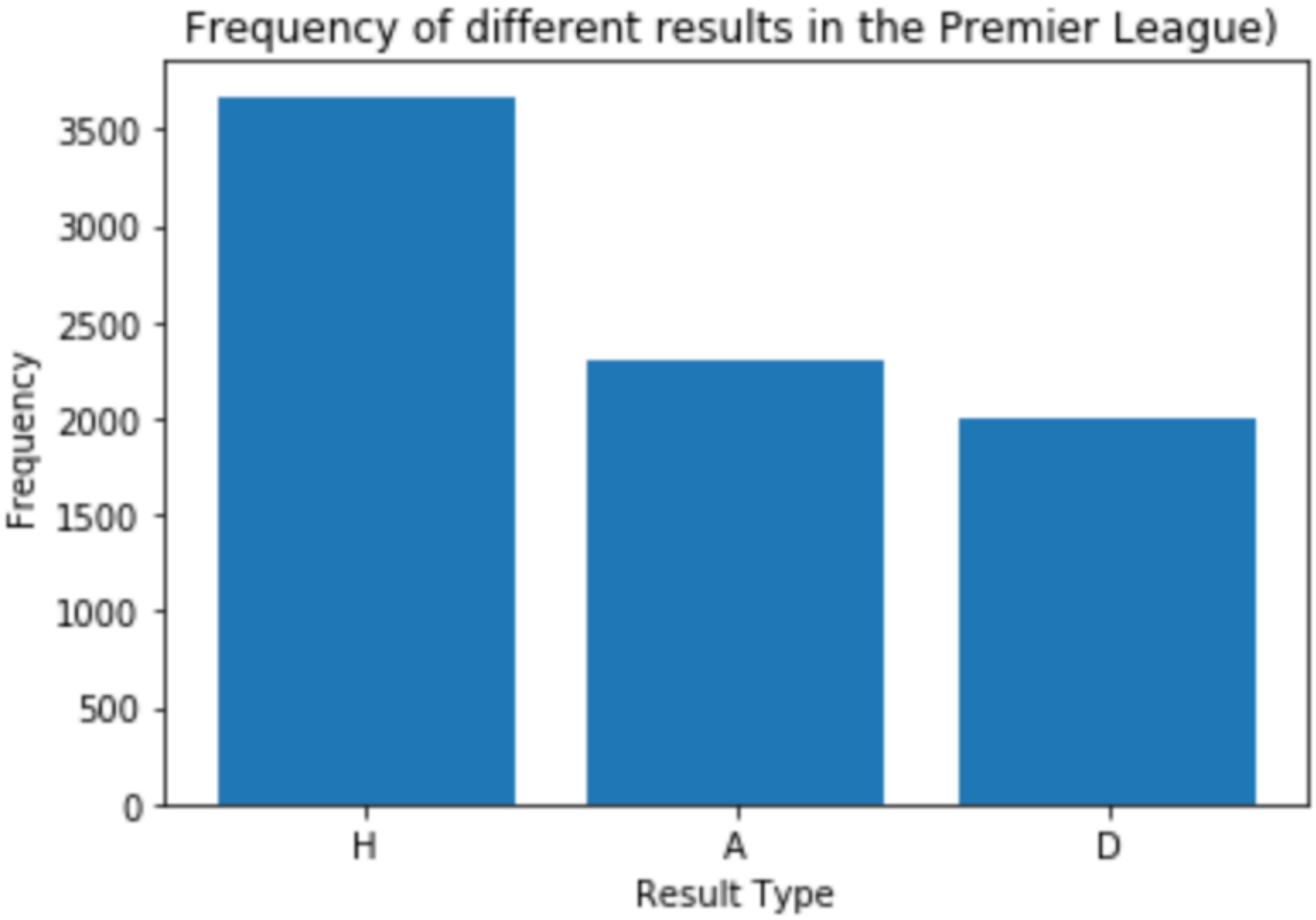
For the preliminary result, I have used the data set for the Kaggle [3].

By the completion of the project, I will implement the Web Scrapping technique to collect the data.

1. Python
2. Pandas
3. Beautiful soup

Preliminary Results

We transform label data using one-hot encoded variable technique
Eg: Hometeam win: 1, Awayteam= 2, draw = 3



Neural Network

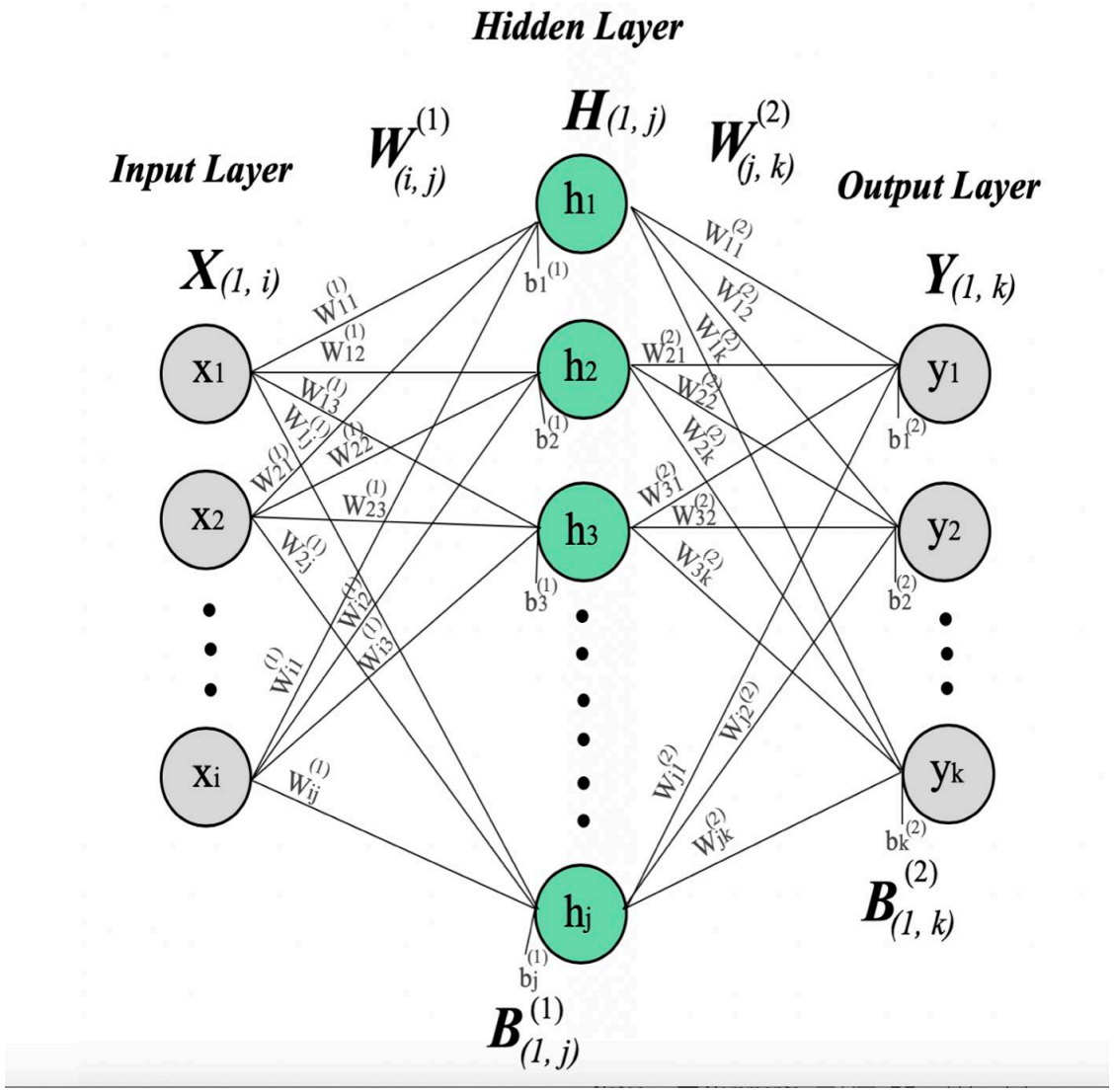
3 Layer Neural network

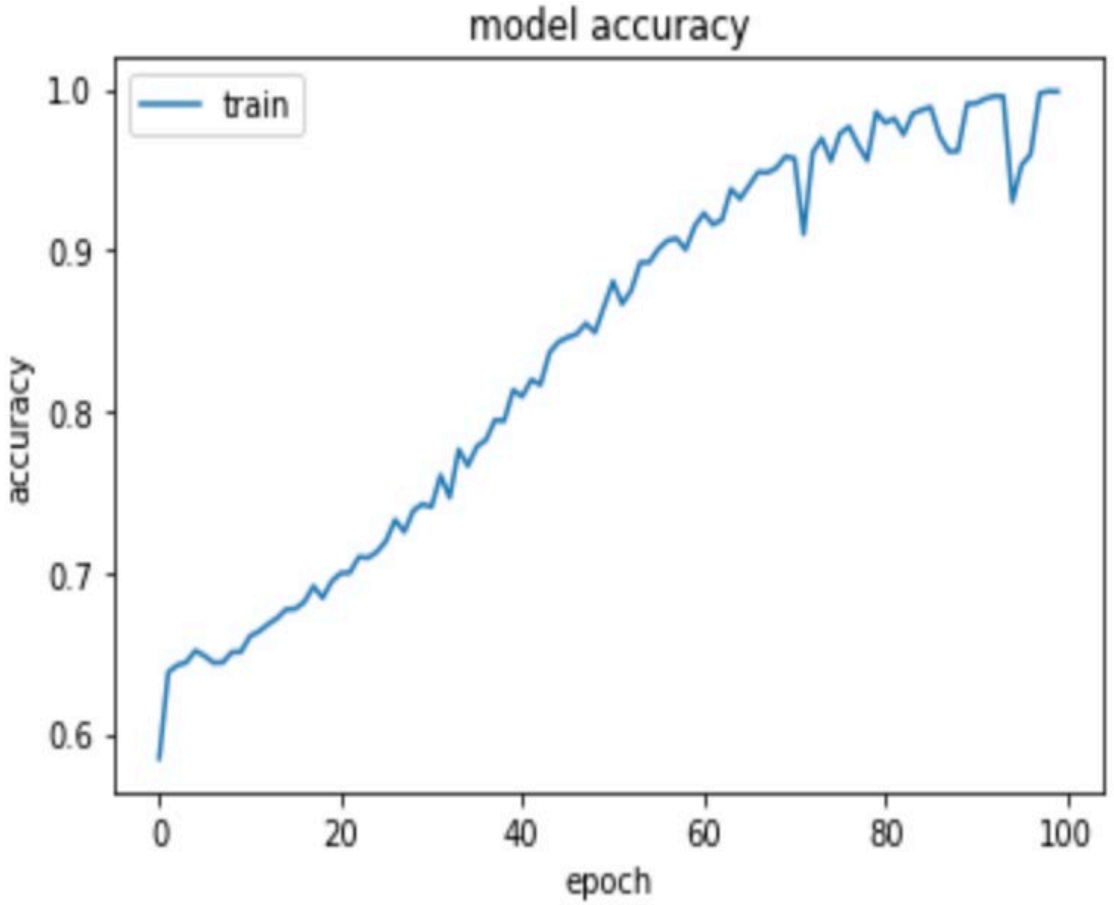
1 Input layer with 110 input features

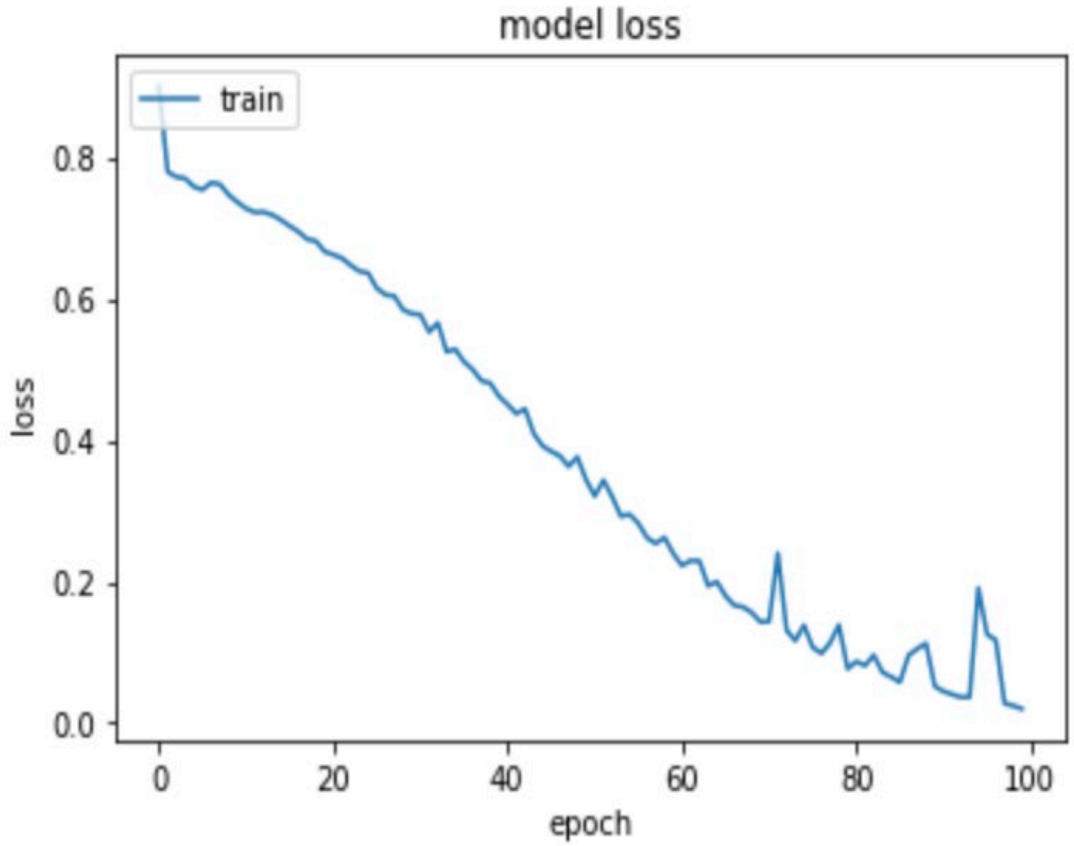
1 Intermediate layer

1 output layer with activation Softmax.
(Three prediction variables)

1. Home win
2. Away win
3. Draw







Test Accuracy: 0.58200

Future Work and timeframe

- Data collection using web scrapping : (First Week)
- Model optimization to increase accuracy: (Second- Third week)
- Hosting this model in the Heroku App (Fourth Week)

Reference

1. https://www.espn.com/chalk/story/_/id/19740480/the-united-states-sports-betting-where-all-50-states-stand-legalization
2. https://www.statista.com/statistics/1126480/sports-betting-revenue-us/
3. https://www.kaggle.com/irkaal/english-premier-league-results