**PRO-Line Props Prediction Model**

*What is the problem you would like to solve?*

* My model will take input from a PRO-Line Props ticket and will output metrics or probabilities that will help make decisions over which picks to successfully parly
* This will solve any problems when making decisions that can be influenced by emotional connection to players or teams

*Who is your client and why do they care about this problem?*

* My clients would be any gamblers who participate in PRO-Line beating as outcomes from the prediction model can be sold to users online via website or social media
* Also will be used by myself and friends who currently make PRO-Line bets solely based on our basketball knowledge and emotional connection to players and teams
* These users care about this problem as it is money-driven and users would like to make the most amount of money possible with the least amount of risk

*What data are you using? How will you acquire the data?*

* I will be using NBA Boxscore data from the previous season when building the model and testing for accuracy of predictions. This data is available from Kaggle’s data repository
* Moving forward for the Model to work in real-time during the next NBA season (which begins in October 2019) the NBA Boxscore Data will need to be scraped directly from the NBA.com website

*How will you solve this problem?*

* There are many ways to approach this problem. Based on my statistical knowledge I would build a regression model that takes into account a number of variables and makes a prediction about the probability of whether a particular stat is more likely to go over or under
* I have not decided if the output on these picks should be a probability percentage or an interval which accounts for pick which have more variance and are much harder to predict
* The player statistics that will be predicted include player points, rebounds, assists
* The model will take into account some of the following variables for player stats:

1. What is that players stat avg vs that particular team this season
2. What is that players current avg over the last 5 games
3. How does that player avg based on the personal matchup against the player on the opposing team at the same position
4. Is the player coming back from injury or playing injured

* The team statistics that will be predicted include 3pt made, Total Steals ,Total Turnovers, Total Combined First Half Points between both competing teams and Total Combined First Half Points between both competing teams
* The model will take into account some of the following variables for team stats:

1. What is that team stat avg vs that particular team this season
2. What is that teams current avg over the last 5 games
3. What is the current starting lineup

* These variables are subject to change once the project has begun and can properly access which variables can be accounted for correctly

*What are your deliverables?*

* Once the CapStone Project is completed I will have a workable Python code which will produce output that can inform decision making over which tickets to make