NBA EDITION FINAL REPORT

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ABSTRACT

We should be able to successfully predict how a rookie may perform in his rookie season based on physical measurements and previous statistics (may be college level). We should also be able to formulate and give the correct order of the current rookies completing their first season based on our work. We will also be using general information about the NBA from online sources such as ESPN and other sports services. We know the NBA has so many different stars, for example Stephen Curry and Russell Westbrook. We want to find how to evaluate a good NBA star. Most NBA player styles are different in the NBA. We should follow different situations to find a good player. From this research paper, physical measurement has a big relation to salary. Not only young draft players, but also 10 years older players still need to focus on body situation in the NBA. It is important that NBA young draft modal, NBA physical body measurement will influence salary. As for a player, they should focus on physical measurement. As for NBA team, customer want to see an interesting player in the every-game.

1. INTRODUCTION

If you have a strong physical measurements, you will probably get a good salary in the NBA, this being the main correlation we have been working on.If you don't have NBA physical measurements, you probably will not be able to get a good enough team to play with resulting in a subpar contract. From NBA physical measurement, they are 9 parts which are body fat, hand length, Height without shoes, hand width, Length agility time, shuttle run, three quarter spirit, standing vertical leap and max vertical leap. When NBA body measurements are of so much influence, the NBA has many good contracts and bad contracts for every different NBA team. It is specially that every year champion team has a good contract. From garbage player, they already have good physical measurement. From 5-year champion team, they have a good contract in their team research. Although NBA physical measurement is a good metrics, this isn't finally rules showing a player. On the other hand, mySQL and data mining knowledge help a lot. I know how to conclude totally data in the science. From data mining class knowledge, they give me most of research way. From those research ways, I could deeply understand computer research with our lives. I know how to use Data Mining in the work. Such correlations are important since they set the foundation for the rookies that are planning on playing in the NBA and definitely for those players that go on to become superstars. Physical measurements are the factor with which current NBA teams decide on which rookie they should or should not draft. The NBA draft combine is basically a test of the physical measurements and this is what our project was primarily based on.

2. DATA SETS

2.1 NBA physical measurement:

https://stats.nba.com/draft/combine-anthro/

NBA physical measurements has 9 parts, we will research which part is so important in the graph. The dataset contains information on the draft combine of the rookies that are going to make their first appearance in the NBA. This data set contains the physical measurements of the players and we plan on using the important data and finding a trend that helps us identify their ideal position with which they should enter the NBA.

2.2 Every team resource:

https://www.basketball-reference.com/ NBA team and player resources follows this graph. We intend to see the shift in the NBA player performances every season and find trends that support our claim. In addition to this we also will look to build a model draft for the young rookies based on their information and trends that we can find. For example 2013 draft, the first pick was not Stephen Curry whereas he is arguably the greatest point guard in today's game.

2.3 Every player Stats:

https://www.kaggle.com/drgilermo/nbaplayers-stats

This dataset may qualify as important. We will be using this for reference as this contains all the player statistics from the previous years. Finding the general level in the NBA usin graphy. We could predict NBA physical measurements based on this dataset. When looking at different NBA superstars a big research group is required.

3 EVALUATION

We will evaluate our research by testing to see if it accurately predicts whether or not a NBA rookie can become a star. We hope to get an accuracy measure of 60%-70%. Some players who did not get the first draft pick but in turn become super stars. We should rethink how to make this error before pickup. Most players change so quickly. When they suffer big hurt and sometimes mental health issues, this may still influence his status. (For example: James Harden(Houston Rockets) has ever suffered these problems.). A comparison between our predicted best rookie and some of the greatest current players will be made in terms of physical measurements and see if there is any correlation between the two. A true order of the rookie season will be found by the end of this project.

4. TOOLS

Jupyter Notebooks:

From this part, we will build NBA physical measurement, we should build a graph, how about this research in the NBA physical measurement.

Python 3:

We will use this download basic datasets graphy, because they couldn't give us crv results directly. These things help us find data tools, because some data have protection levels.

NumPy:

We could get this graph from an NBA resource, this helps us get a good analsize result. Some websites need to use these tools.

Pandas:

We will research basic data, building graphy. How about research from this data graphy.

Excel:

We will be using excel as well to make a few graphs that are relevant to our project.

SciPy:

We will be using libraries such as SciPy in order to find correlation constants and attributes that link the different datasets

5. TECHNIQUES APPLIED

Processing: we will need to convert our data into compatible forms and then merge them together. This will include creating NBA player physical measurement, each season statistics and how about NBA physical measurement changed in each season. We should clean another player in the NBA player stats. We will focus on those data sets getting results in the final.

Analysis using the datasets, we will form logistic regression with NBA physical measurements. This will form a baseline of our research, we will need to analyze the effect of each attribute on the low level rate NBA physical measurement star. After analyzing the relationships between all variables, we will create a regression model to generate the probability of NBA body situation and physical

Clustering was done using different methods and using this we were able to successfully find out outliers. This was important to us since this part is really important regarding our project since we took into account different physical measurements for different positions in the NBA. Finding outliers and using their attributes and analyzing their seasons have given us a better outlook on how the NBA works and what each team looks at when they are picking their original draft members.

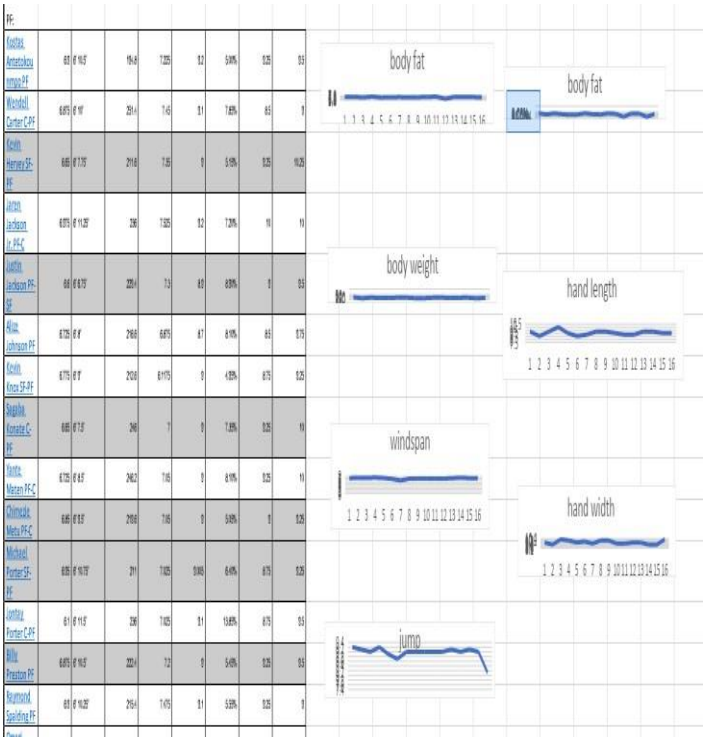
Since the NBA is already classified into different positions and this project looks and focuses specifically on different positions, classifying further into different sub positions was meaningless to us.

6. KEY RESULTS

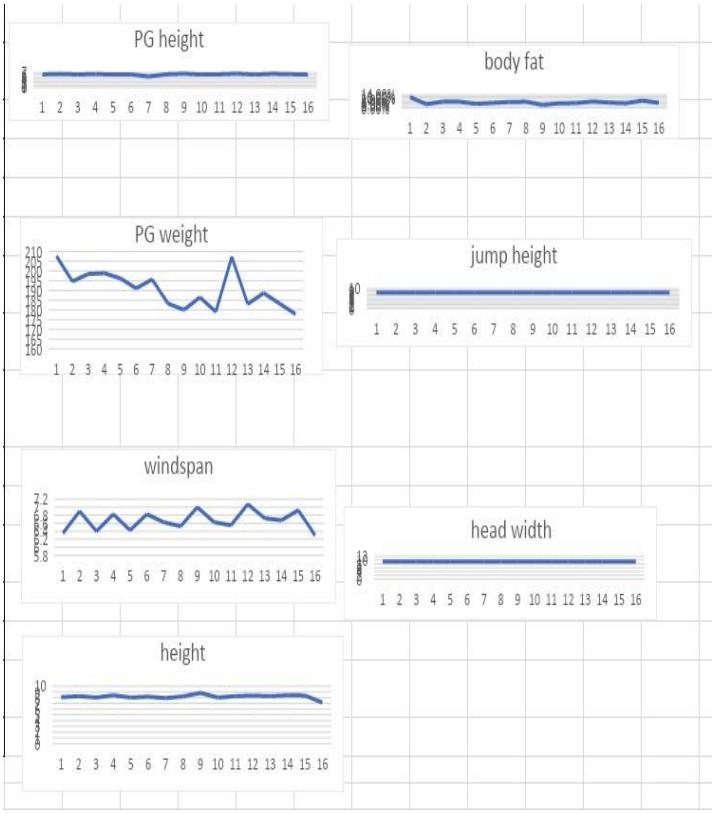
The initial phase of the project involved cleaning up pf the data and pruning. We have been successful in doing so and this makes it easier to analyse the data without null values present in between.

We then merged the datasets in order to help analyzing the data easier. We then were able to bring out a trend in the heights, weights, wingspans of the rookie physical measurements datasets.

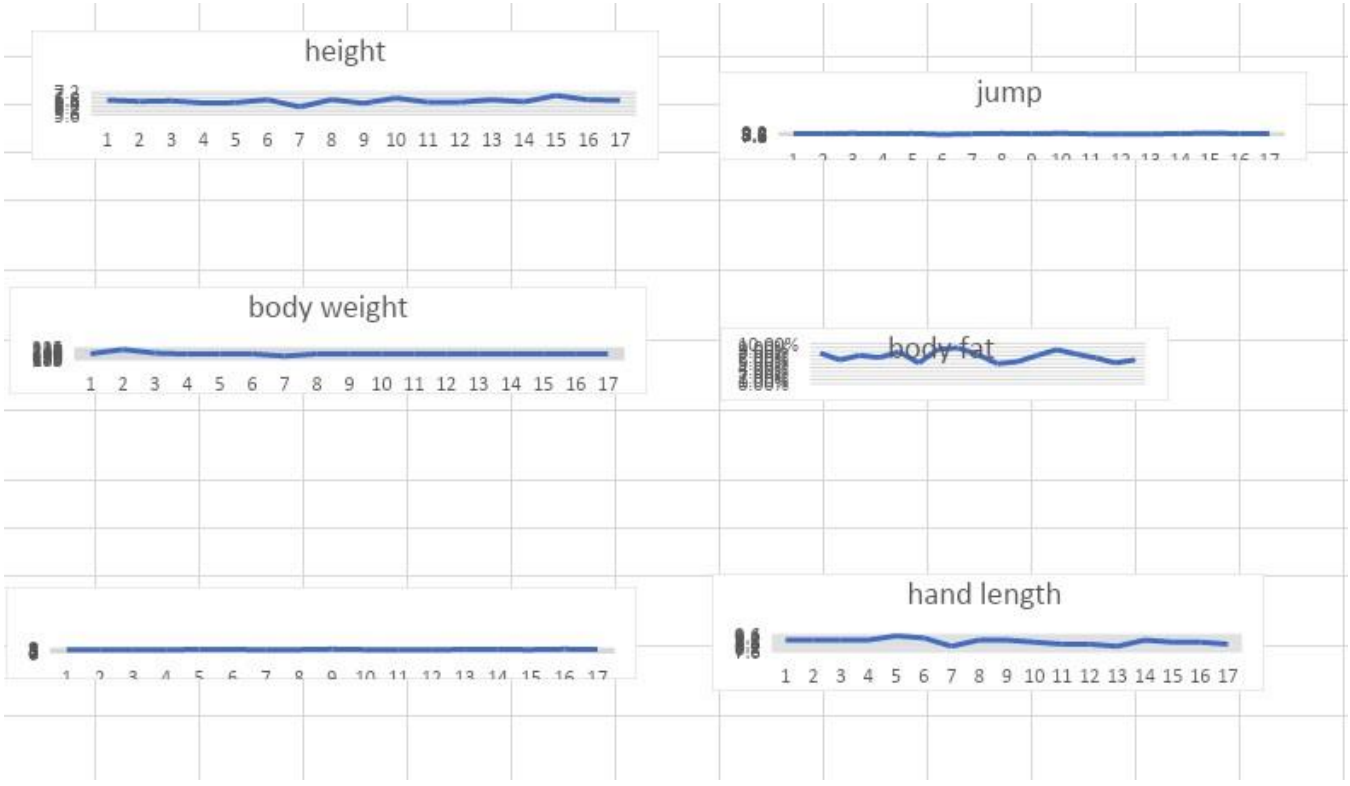
We were able to conclude that the heights involving the guard positions such as Pg and Sg do not differ much with a few outliers whereas positions such as forwards usually have more change in their physical measurements.



The PF position NBA rookie trends shows very less difference but there is a sudden dip in jump when the height increases. Wing span, Hand width and other physical attributes remain the same with no dips.



PG weights show a lot of change and therefore weight is not generally taken into account for a PG since strength of PG is not valued as the PG usually adds in the team for assists and shooting. There is a lot of change in wingspan too since most of the PG do not rebound.

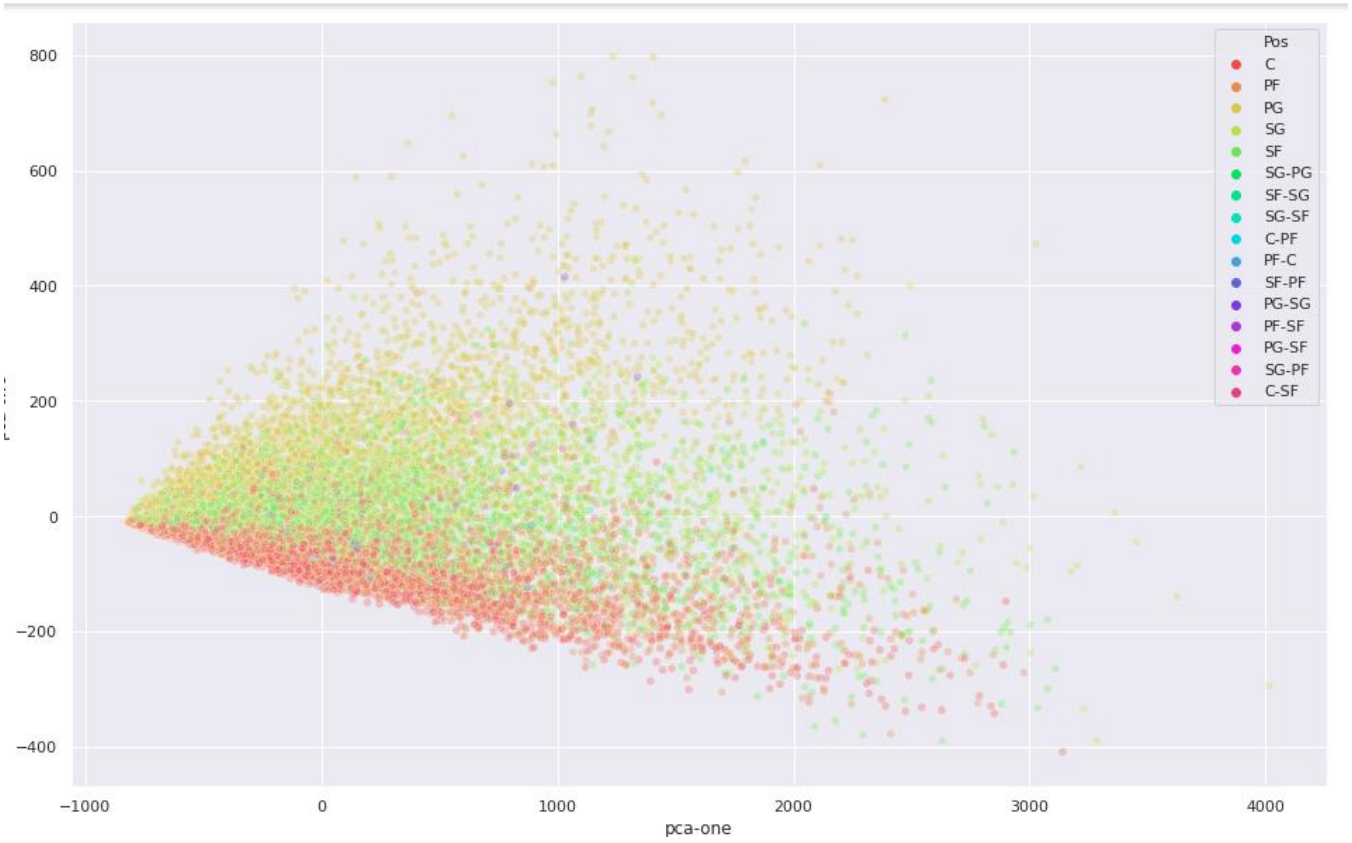


The above graphs are that for a Centre. The graphs are usually all similar and show very less outliers since C are players that usually play the defensive role such as rebounding and blocking having shooting or finishing or playmaking as secondary abilities.

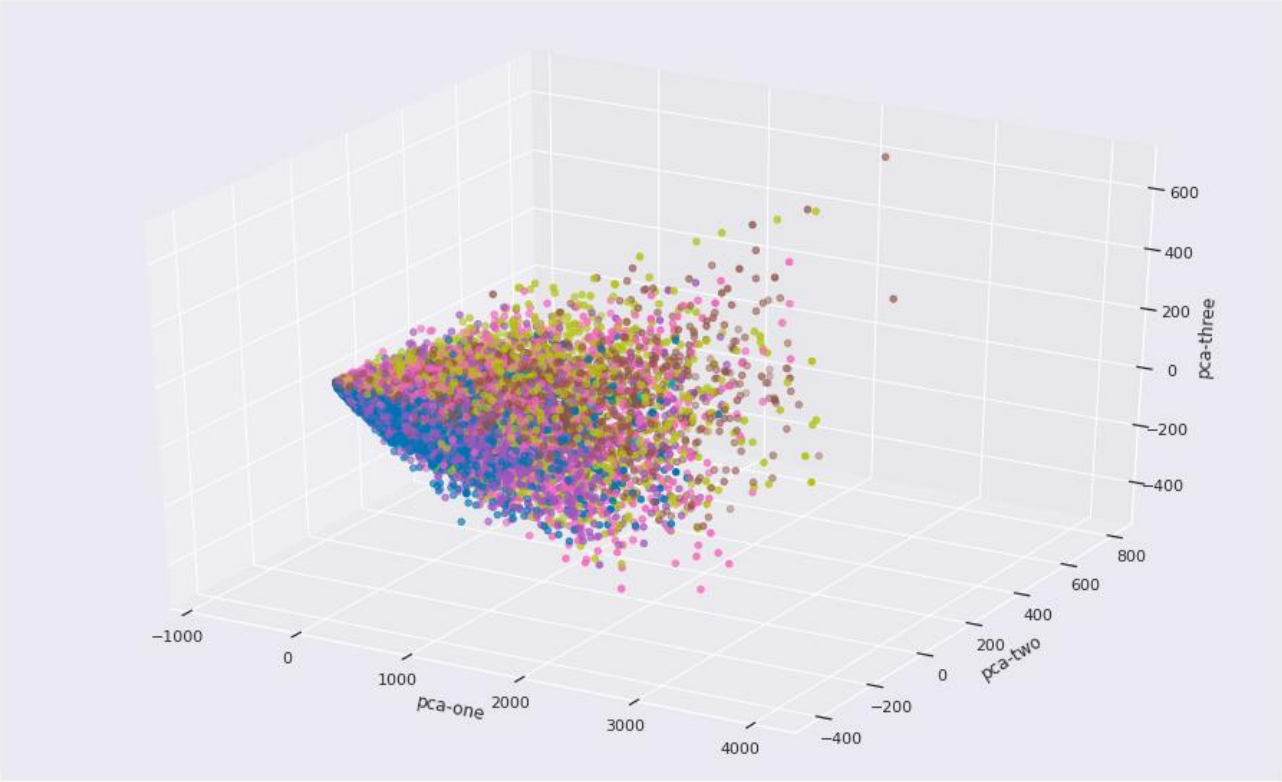
From NBA young drafts, NBA physical measurement could show good problems in this article. From NBA physical measurement, although they will be good at one part, this still won't be able to get them though the NBA draft. To start with, NBA physical measurement have nine part. We should focus on body fat, 3 quarter height in different article and hand length. Although tell is not important element in the NBA draft, we could find 5 different sites in NBA situation. If you don't know NBA, the general NBA player is from about 6.00-7.00 foot in the NBA league. If player does not have the above attribute set belong, the player should have another strong skill. In addition, different player sites should focus physical measurement in the NBA team. When we compare physical measurement, we should focus on NBA part. PG (point guard), SG (shooting guard) come under the same group. C (center), SF (small forward), PF (power forward), come under the same group. For SG, PG, the NBA typically need to focus on body fat, three quarter run and shuttle run. From C, SF, PF, they should focus on standing vertical leap and max vertical leap. It is essential to the SF , PF and these two positions should focus on the above attribute the most of part in NBA physical measurement. When we compare with NBA physical measurement two group, SG, PG qualitied was quicker than in another three sites and forward are stronger than guards. For example: Kyrie Irving (SG) is quicker than Giannis Antetokounmpo (F). Giannis Antetokounmpo (F) is stronger than Kyrie Irving (SG).

On the other hand, if you have a strong body, you still need to build a good basketball ball quotient in the NBA. For example, most of basketball skills in the game. If basketball player just focuses on skills, they go on to become a good player as we have noticed. For example, Stephen Curry does not have strong physical measurements, he was still over physical measurement in the young season. Stephen Curry already crossed the physical measurement line. Fourthly, NBA physically measurement is a quality level in the body. If young draft player doesn't have a good physical measurement in the body, this will show you have a bad attitude as a player. From NBA physical measurement draft, we could imply next NBA team. From young draft, you should maintain an average line in terms of physical measurements in the modal. NBA physical measurement should keep an average line in every time. For example, Dirk Nowitiz didn't eat ice cream 20 years.

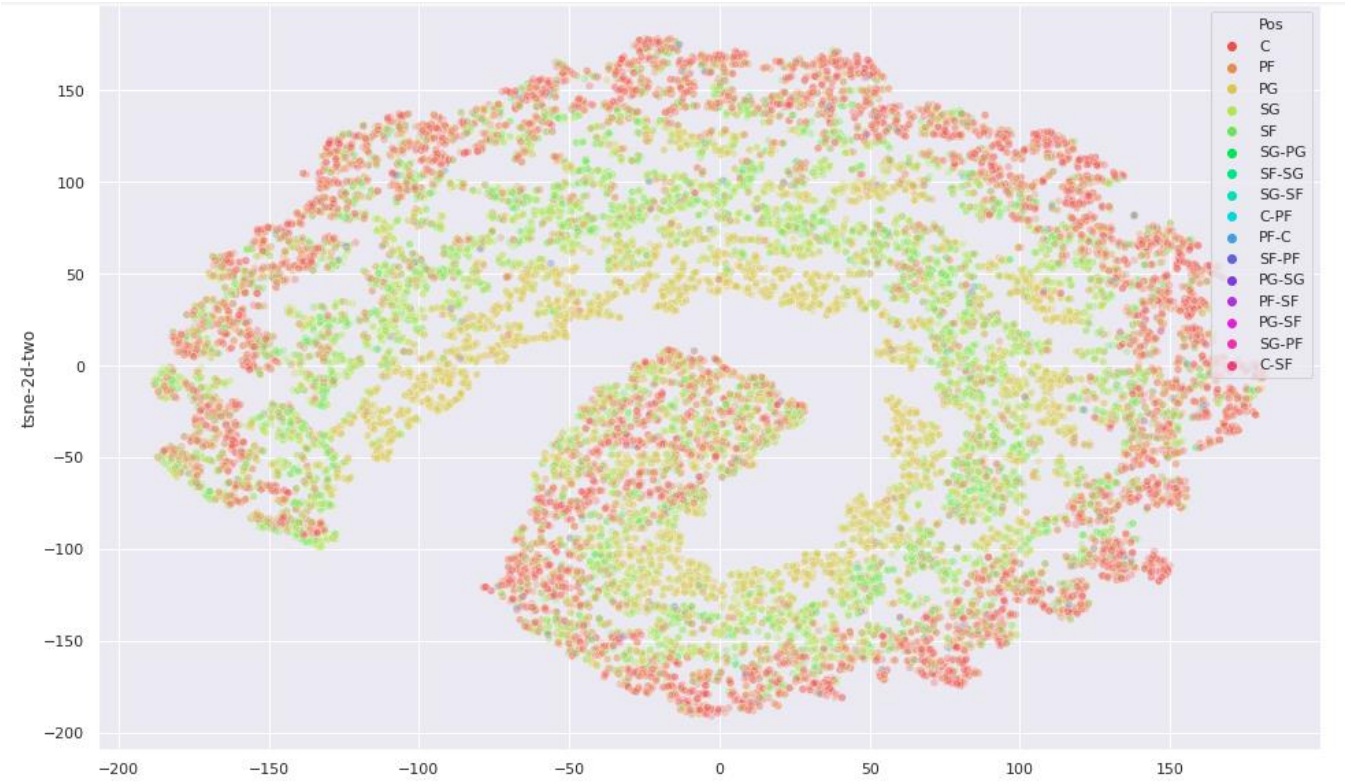
Furthermore, when NBA players do not have a good physical modal in the first season, they could change physical situation in youth contract. For example: most of player have a good attitude, they become a nuclear NBA star. Giannis Antetokounmpo, Kawaii Leonard didn't have a good NBA physical measurement and pick, instead they used their attitude to change physical measurement. Whenever you put any sites in the league, NBA player should have a positive attitude. From NBA physical measurement, most of team should find a good second role, drop elective player in the list. Most of manager find good second list in the NBA player because most of player have good statistics in the list. For example: Jeremy Lin and Ben Wallace's physical measurements are at an equal level with first role pick player, even though they didn't get second role picks. Physical measurement is used by a team to find a good player.



After doing dimension reduction since the data set had a lot of attributes that are important and relevant to our project. This is an example of the PCA model that we have used to show the important clusters that are formed. As we can see that there are certain number of outliers that are usually in the PG and SG positions. This is because point gaurds and shooting guards are not primarily based on physical measurements and this will also be proven in the next graph. Whereas the forwards especially the centres are more clustered and finding contextual outliers is almost impossible since physical measurements is given more importance as compared to their ball handling ability.



The above graph is also a dimension reduction PCA model. This model is of the player season statistics and by comparing this graph and the one above it is noticeable that Centres with certain physical measurements perform a certain way and this is exactly what teams look at when they look to recruit new players. The point guards have more contextual outliers since physical measurements and performances are generally not correlated. This is generally the case with most of the forwards and the guards and they follow a very similar pattern. Some forwards do perform as point guards and shooting guards even though their physical measurements expect them to play as a forwards.



This is the TSNE model for the same player statistics dataset.

However, team should face to NBA physical measurement result, NBA physical measurement give team a good advice in the NBA team. From NBA statics, we would see another statics NBA team in the NBA board. When we see a good player, we couldn't focus on NBA physical measurement. At least, every player should come average line in the NBA physical measurement. If NBA player just focus on physical measurement, NBA will become a football game. Most of football game just focus on their body in this structure. Therefore, NBA physical measurement should be an important signal in each team. Team still should focus on 3 points, 3 percent, 2 points and 2 percent. NBA should conclude those results. If we want to data mining in the NBA more statics, we should focus on NBA more result in the NBA.

In conclusion, we have learned how to use mySQL and QuickView language in the SQL list. From NBA physical measurement, we learnt how to go about using data mining knowledge. From data mining knowledge, we could be separate way in the NBA physical measurement. We could research how about details in the lives. Data mining class give me most of knowledge how to use research way in the data science part. From NBA physical measurement, we should focus on more about result in the body. If you don't have NBA physical measurement, you cannot get a good salary in the NBA. From those statics, we could know NBA physical measurement in the list. If you don't understand NBA physical measurement, we couldn't separate how about good player and bad player. If player don't understand NBA physical measurement, NBA physical measurement have so much qualification. From NBA physical measurement, they should have so much NBA physical measurement in the record. From each season physical measurement, NBA team could give different salary in the original contract. NBA have most of good data mining manager, for example Houston Rockets follow data mining finding most of good second role player. Every year manager to save money from data science knowledge. NBA have most of way showing

good contract or bad contract. Physical measurement could reduce bad contract because another situation couldn't predict. From most of part, Data Mining can connect with society. We should seriously face to each situation.

We also meddled with data visualizations and this is one such example:

These are the parallel coordinates for Roy Hibbert an NBA player.