

Writing Research Reports Iteration 1

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1 Introduction

This project is to be used as a way to predict NBA winners based on on-going characteristics in which I seem to deem important. What I like to be able to do is create a dashboard that will provide all the necessary information about what I think influences the game of basketball the most. I want to be able to filter out the data of an upcoming team matchup and predict the winner based on things like: win vs loss of matchup, the team that has better record, home vs away game winnings against that team, player point outliers against a certain team, average amount of points scored in matchup and difference in points scored. I will be adding and getting rid of certain characteristics along the way. Be aware to not use this model for any type of sports betting since, all models is wrong, only some are useful.

2 Description of the Data

1. I got the data from Kaggle. The link I used was: <https://www.kaggle.com/datasets/umutalpaydn/nba-20202021-season-player-stats>
2. This data frame has all the NBA players from 2020 and 2021
3. Content: 1.Per Game Stats: Basically dividing every individual stats by the played game . 2.Per 36 Minute Stats: In order to calculate per-36 minute stats, you divide 36 by the number of minutes the player actually played, then take that number and multiply all of the player's stats by it. 3.Advanced Stats: These are more focused on the players direct effect on winning the games or scoring a point. For example a key tenet for many modern basketball analysts is that basketball is best evaluated at the level of possessions. During a single game, both teams have approximately the same number of possessions, because they alternate possession. (A team can have slightly more if it begins and ends a quarter or half with possession.) However, over the course of the season, teams play at very different paces, which can dramatically color their points scored and points allowed per game. Therefore, these analysts favor use of points scored per 100 possessions (offensive rating) and points allowed per 100 possessions (defensive rating).

3 Methods

4 Results and Discussion

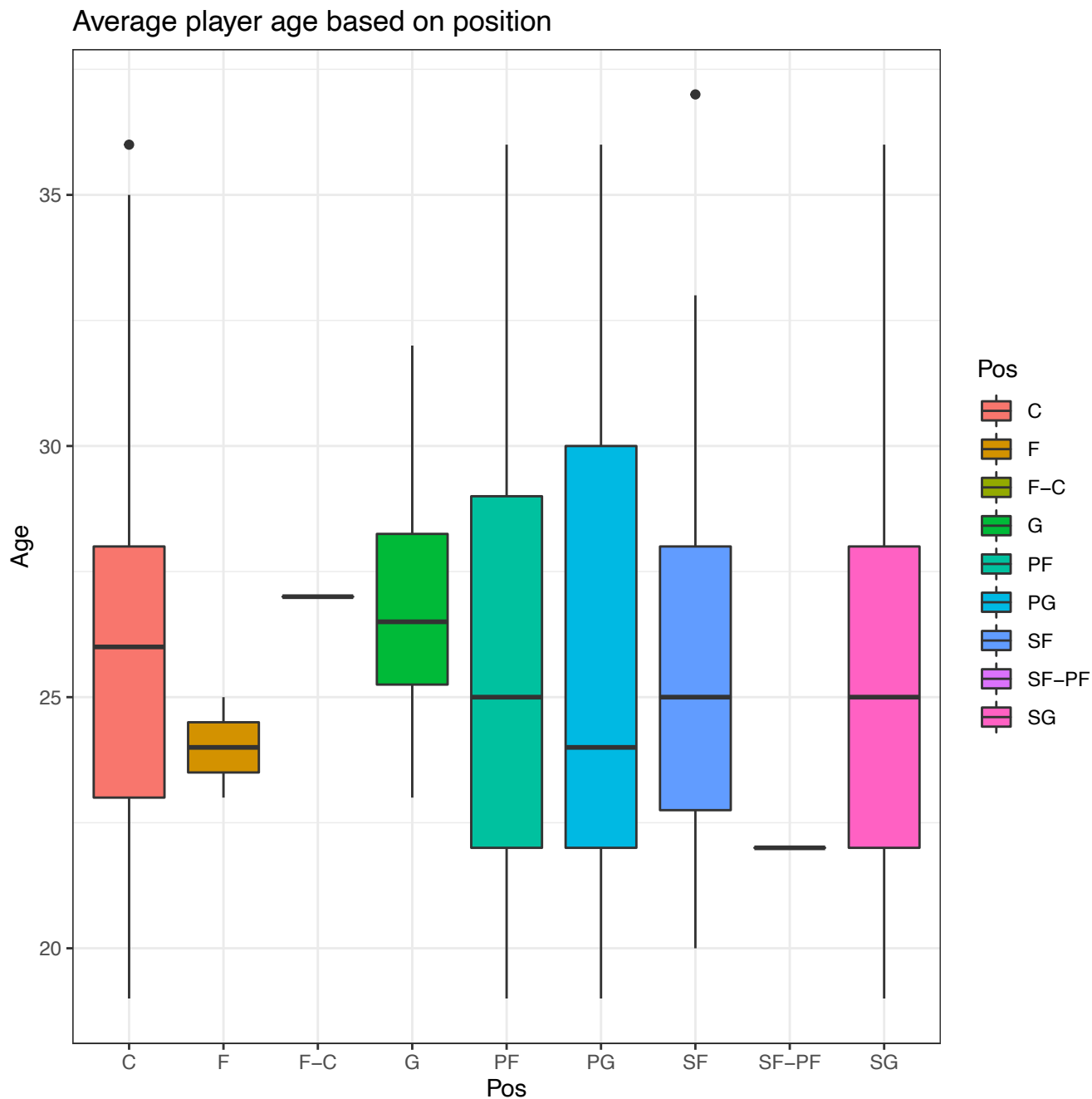
5 Conclusions

6 Citation

7 Project Milestone 2

7.1 1 Multiple boxplot

An initial investigation I wanted to know the average player age based upon their position to see if there is a correlation between player position and the amount of experience. Based on the results,

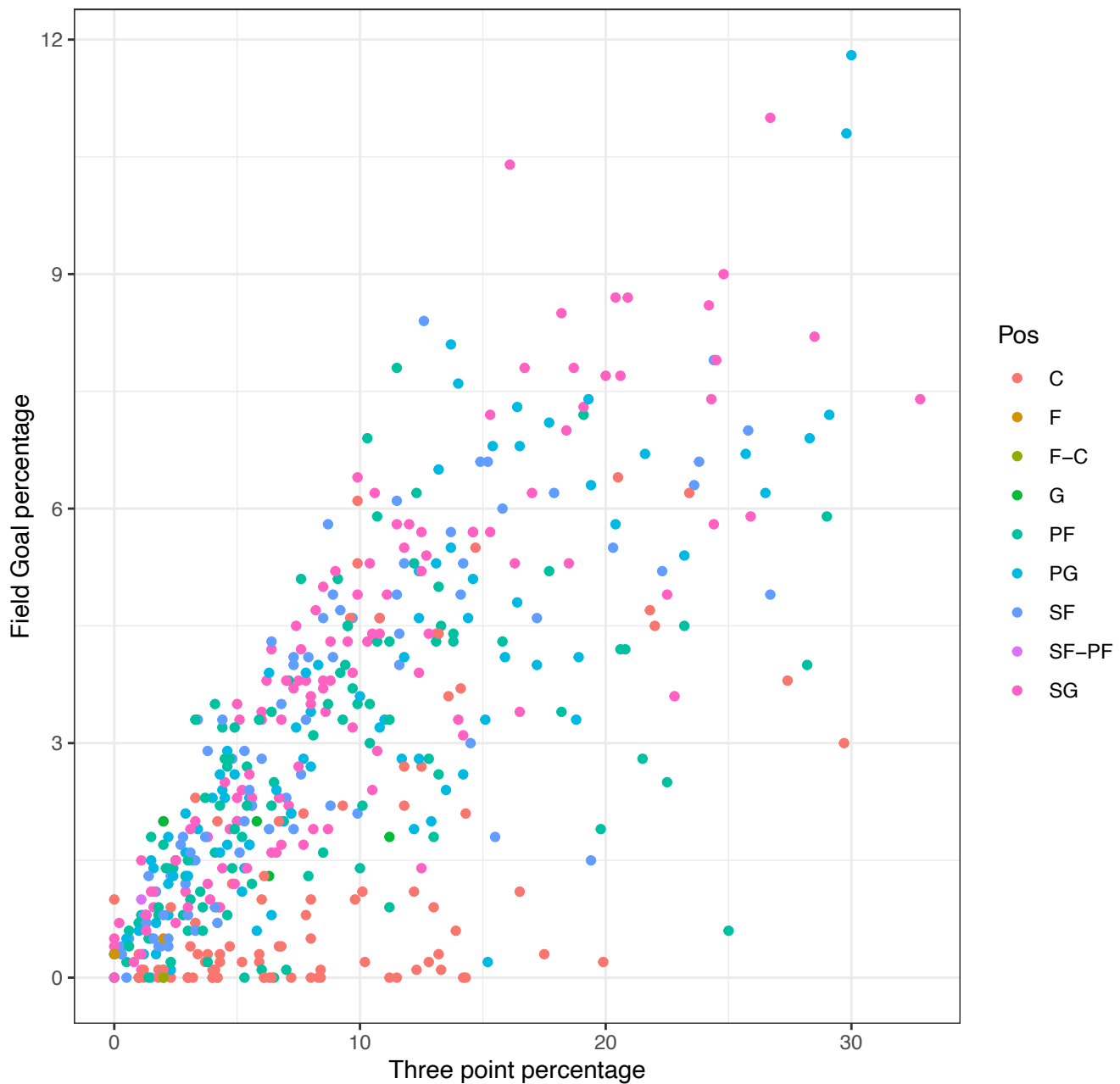


[1] 25.62374

8 2 Scatterplot

I wanted to see if there was a correlation between 3 pt attempts and the amount of points scored

Points scored vs 3pt attempt



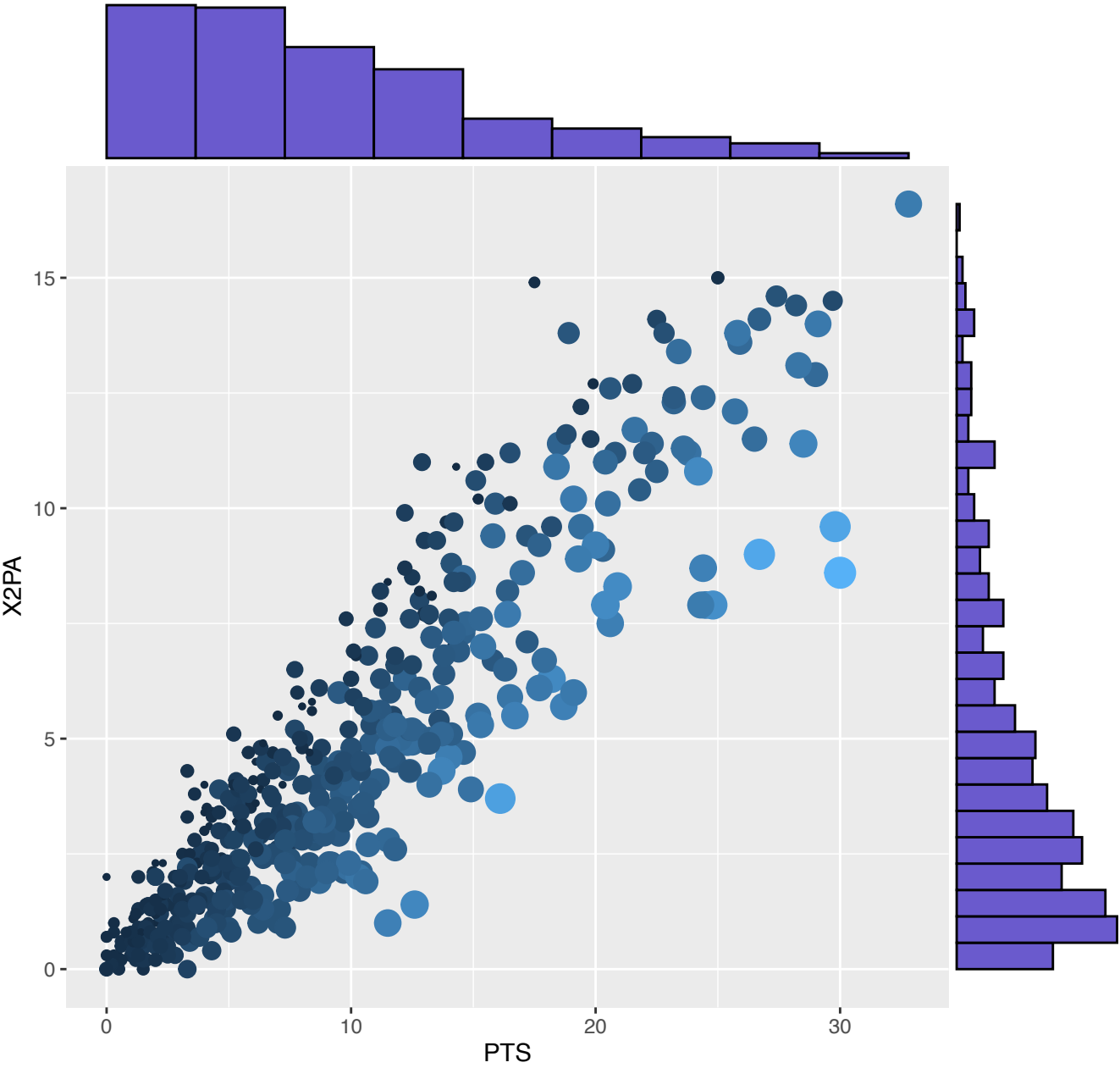
9 3 Histogram+Scatterplot

I wanted to see the relationship between 2 point attempts, 3 point attempts and the amount of points players average

	Player	Pos	Age	Tm	G	GS	MP	FG	FGA	FG.	X3P	X3PA	X3P.	X2P	
1	Precious Achiuwa	PF	21	MIA	28	2	14.6	2.6	4.4	0.590	0.0	0.0	0.000	2.6	
2	Jaylen Adams	PG	24	MIL	6	0	2.8	0.2	1.3	0.125	0.0	0.3	0.000	0.2	
3	Steven Adams	C	27	NOP	27	27	28.1	3.5	5.8	0.603	0.0	0.0	0.000	3.5	
4	Bam Adebayo	C	23	MIA	26	26	33.6	7.4	12.9	0.573	0.1	0.2	0.400	7.3	
5	LaMarcus Aldridge	C	35	SAS	18	18	26.7	5.9	12.5	0.476	1.3	3.7	0.358	4.6	
6	Ty-Shon Alexander	SG	22	PHO	3	0	2.7	0.0	1.0	0.000	0.0	0.3	0.000	0.0	
	X2PA	X2P.	eFG.	FT	FTA	FT.	ORB	DRB	TRB	AST	STL	BLK	TOV	PF	PTS
1	4.4	0.590	0.590	1.3	2.4	0.561	1.3	2.7	4.0	0.6	0.4	0.5	1.0	1.9	6.5
2	1.0	0.167	0.125	0.0	0.0	0.000	0.0	0.5	0.5	0.3	0.0	0.0	0.0	0.2	0.3
3	5.7	0.606	0.603	1.1	2.3	0.468	4.3	4.6	8.9	2.1	1.0	0.6	1.7	1.9	8.0

4	12.7	0.576	0.576	5.1	6.0	0.841	1.9	7.3	9.2	5.3	1.0	1.0	3.0	2.6	19.9
5	8.8	0.525	0.529	0.9	1.2	0.762	0.8	3.5	4.3	1.9	0.4	0.9	0.9	1.5	14.1
6	0.7	0.000	0.000	0.0	0.0	0.000	0.0	0.3	0.3	0.3	0.0	0.0	0.0	0.3	0.0

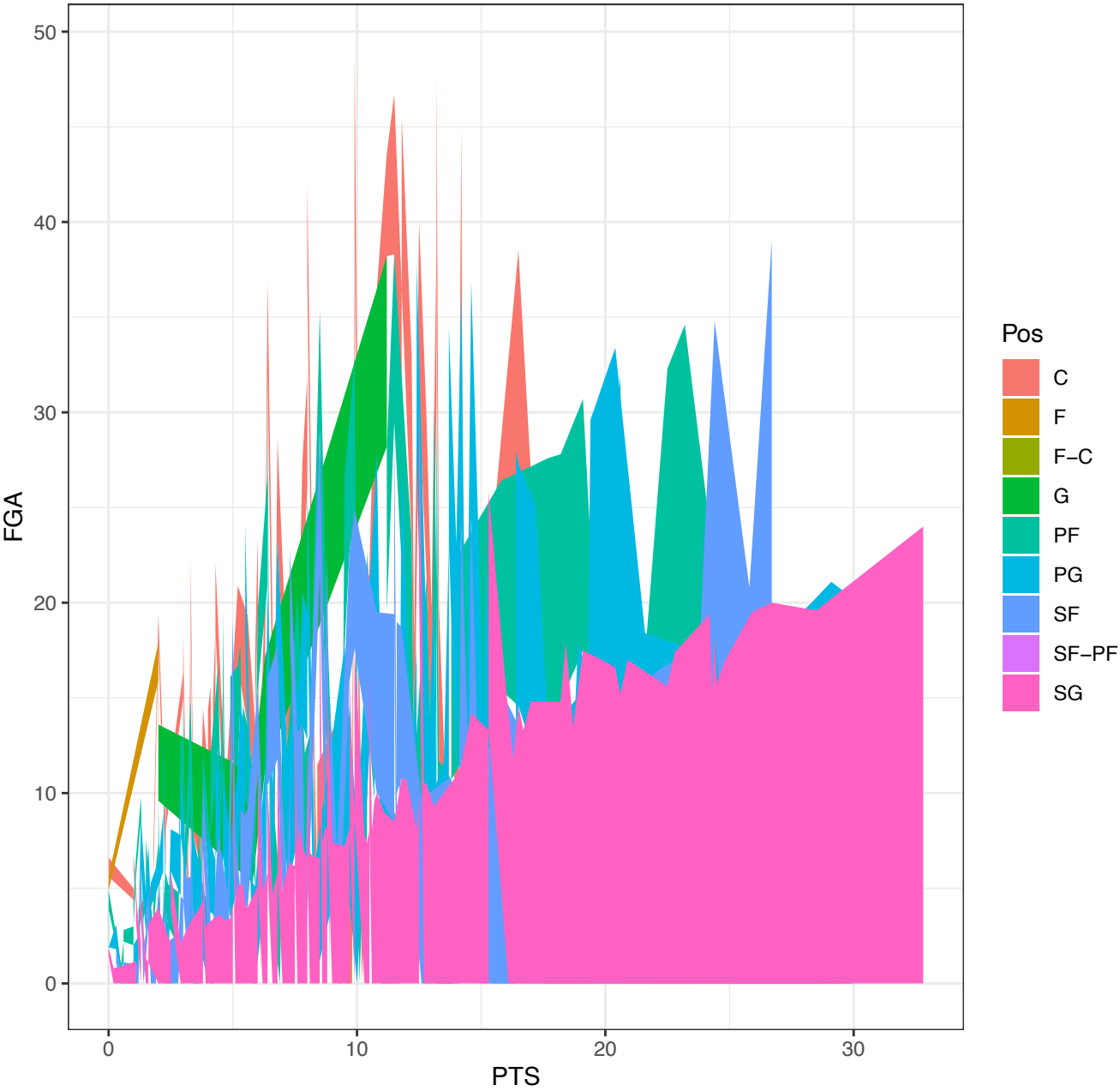
Pts based on 2 pt and 3 pt attempts average per game



10 4 Stacked Area Graph

I did this without thinking I was going to find anything intresting but, I found out that the Center position for some reason creates more field goal attempts than any other position.

Number of points per field goal attempt



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etc...