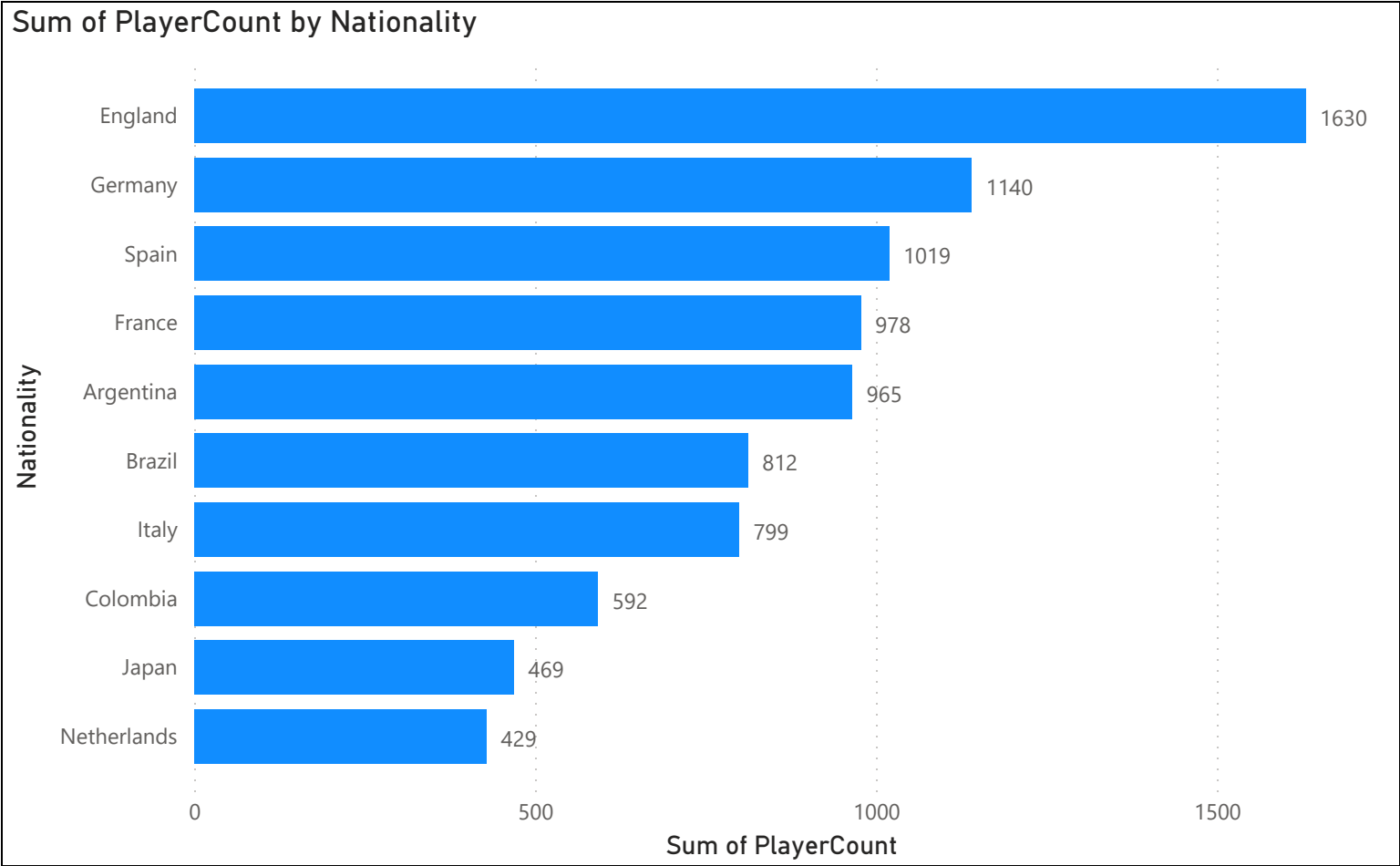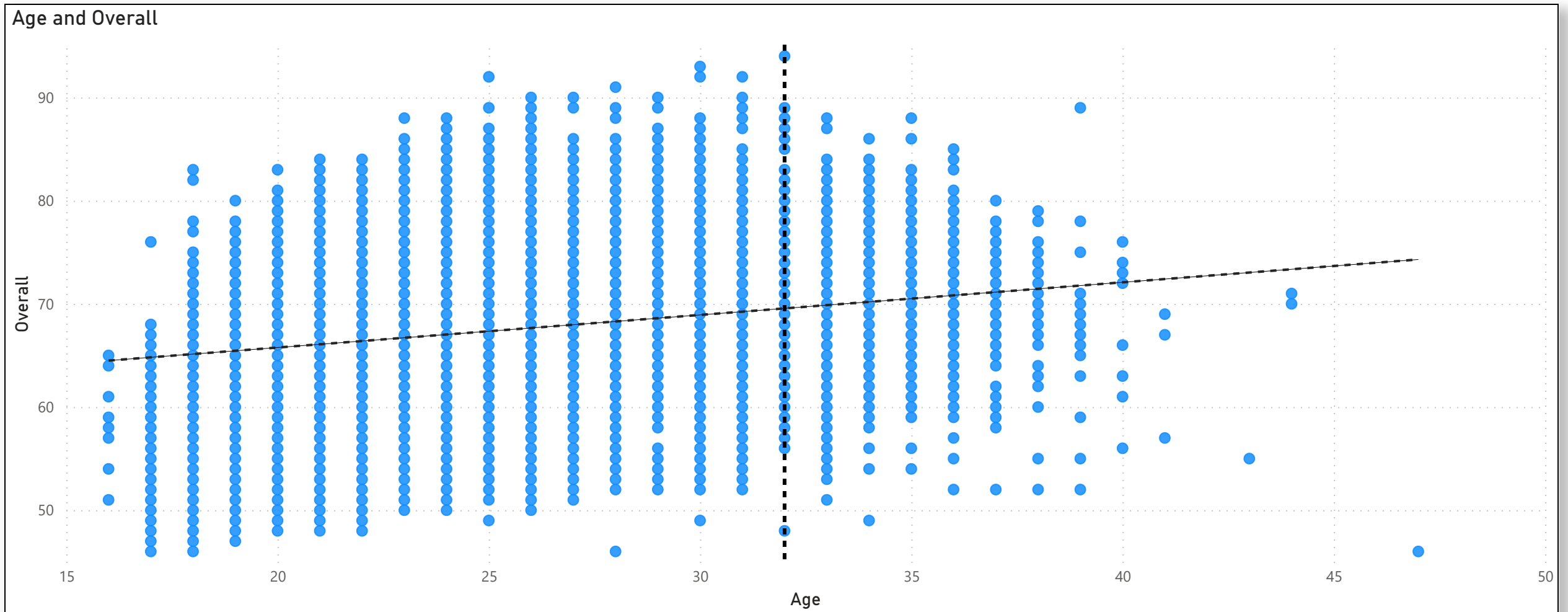**Prepare a rank ordered list of top 10 countries with most players. Which countries are producing the most numbers of footballers that plays at this level?**

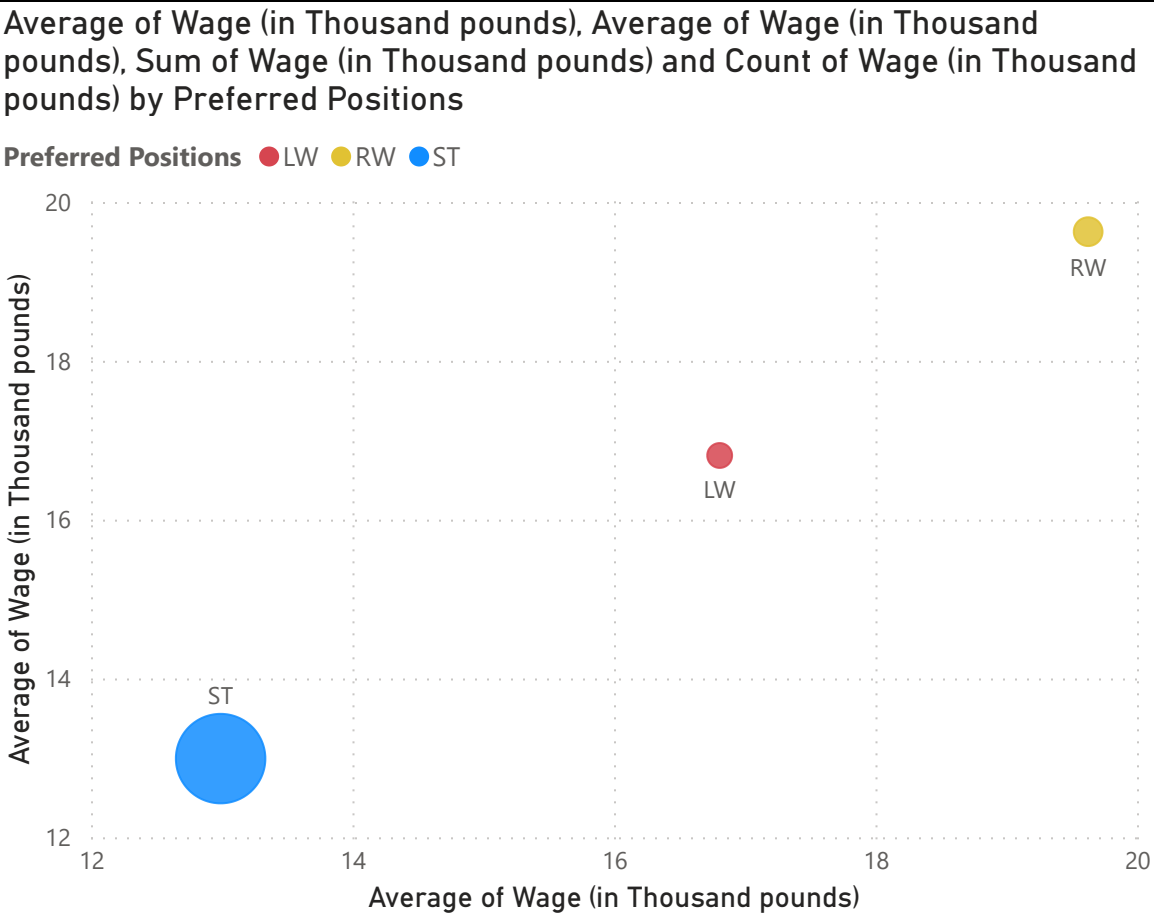| Nationality	Sum of PlayerCount
England	1630
Germany	1140
Spain	1019
France	978
Argentina	965
Brazil	812
Italy	799
Colombia	592
Japan	469
Netherlands	429
Republic of Ireland	417
United States	381
Chile	375
Sweden	368
Portugal	367
Mexico	360
Denmark	346
Poland	337

Sum of PlayerCount by Nationality

England is producing most number of footballers that play at this level with 1630 players, followed by Germany and Spain with 1140 and 1019 players respectively.

Plot the distribution of overall rating vs. age of players. Interpret what is the age after which a players stops improving?
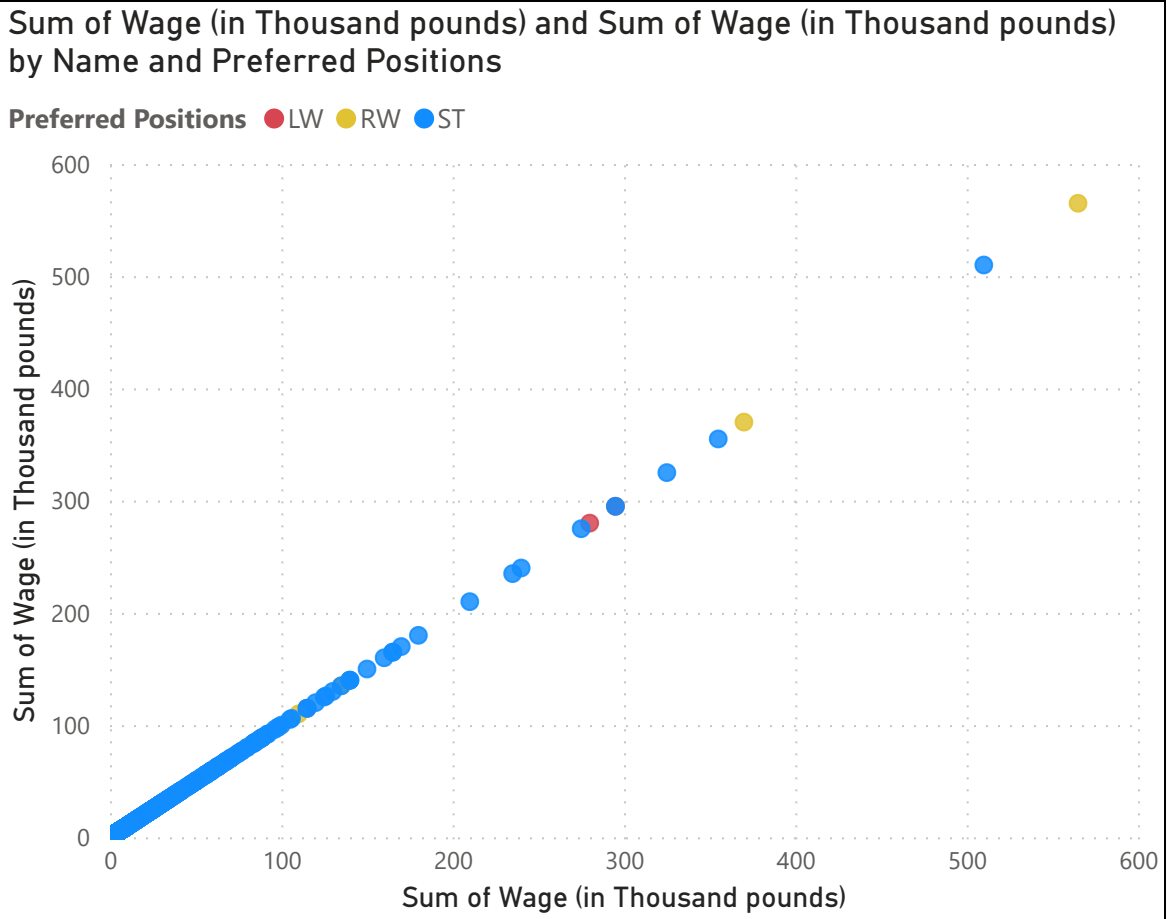

Age and Overall

The overall rating vs age follows a slightly upward trend. However on detailed observation it appears that the highest overall ratings tend to increase from the age of 20 to 32 and then a decline can be observed, suggesting that players stop

Which type of offensive players tends to get paid the most: the striker, the right-winger, or the left-winger? Visualize through a scatter plot
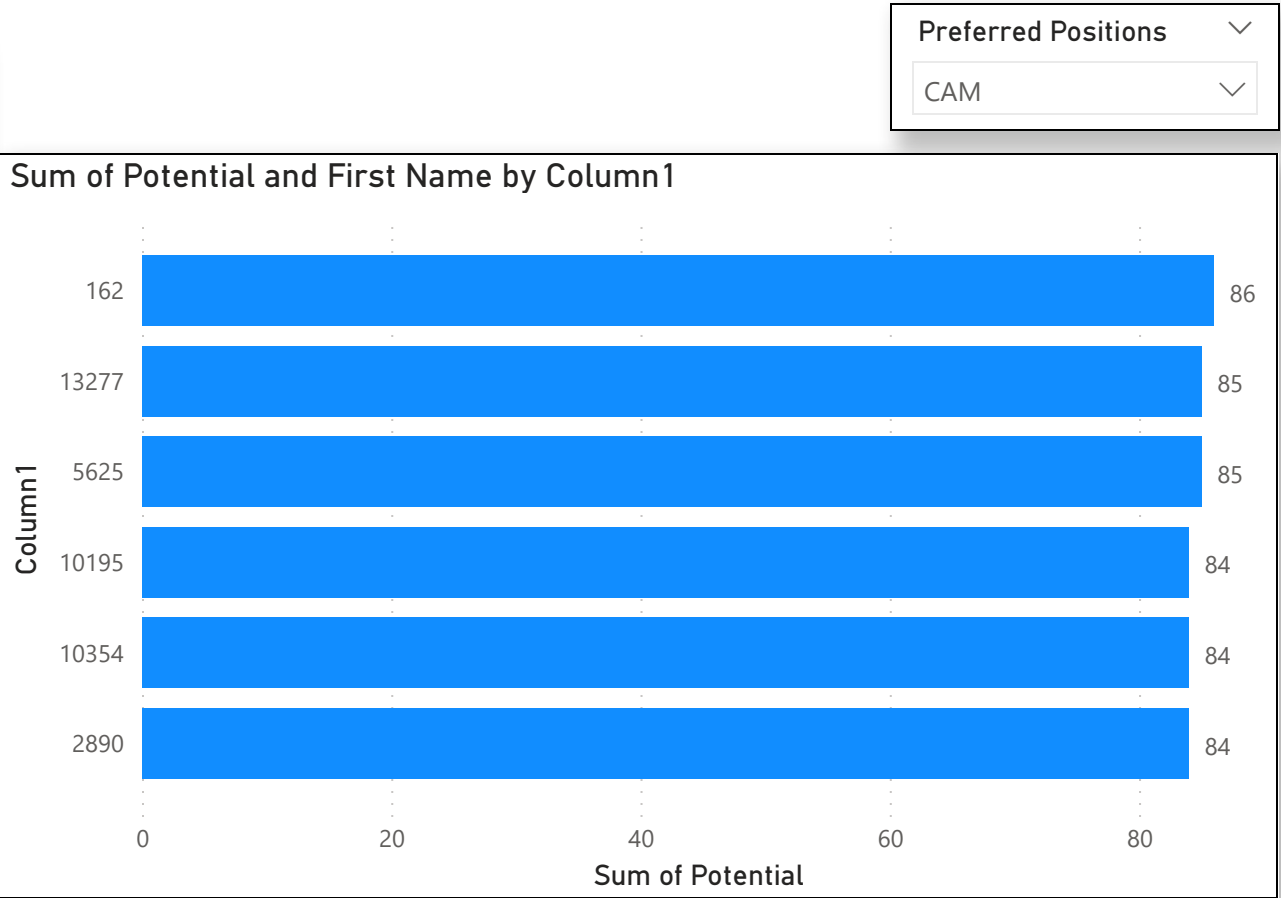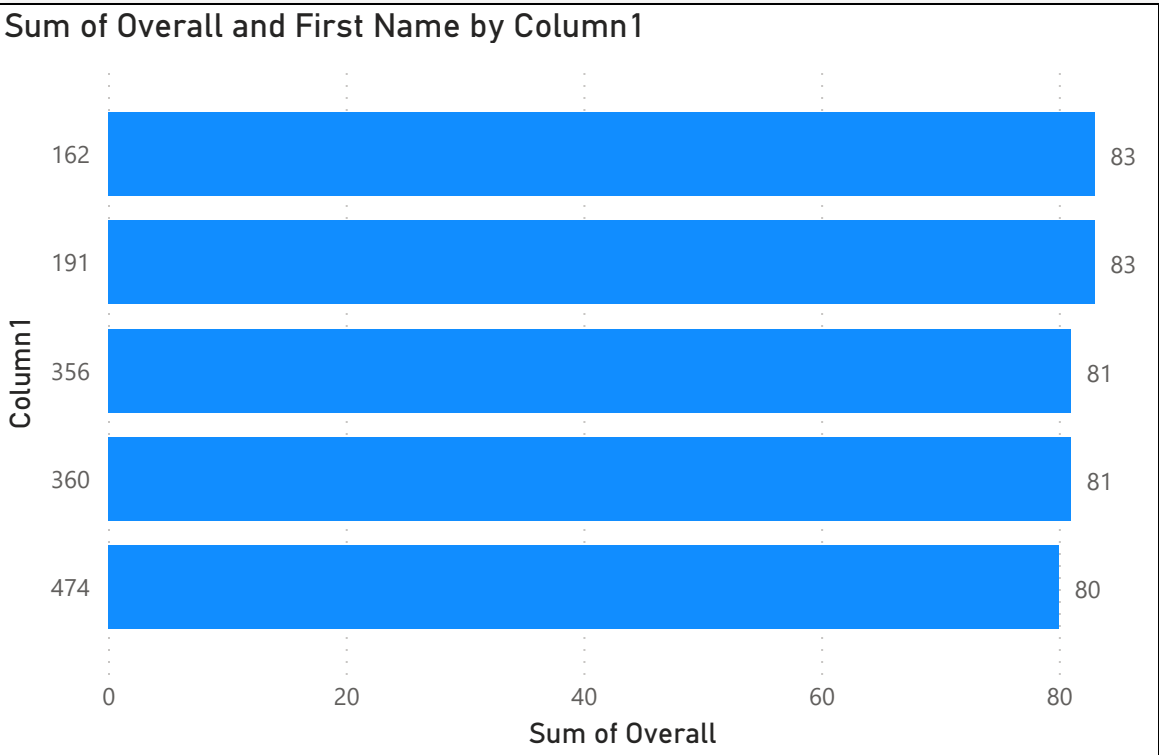

Average of Wage (in Thousand pounds), Average of Wage (in Thousand pounds), Sum of Wage (in Thousand pounds) and Count of Wage (in Thousand pounds) by Preferred Positions

Preferred Positions ●LW ●RW ●ST

Sum of Wage (in Thousand pounds) and Sum of Wage (in Thousand pounds) by Name and Preferred Positions

Preferred Positions ●LW ●RW ●ST

· **From the plot , it is observed that on average right-wingers get paid the most.**

· **While there are 1847 strikers, their average wage is 13000 pounds.**

· **There are 73 left-wingers whose average wage is 16810 pounds.**

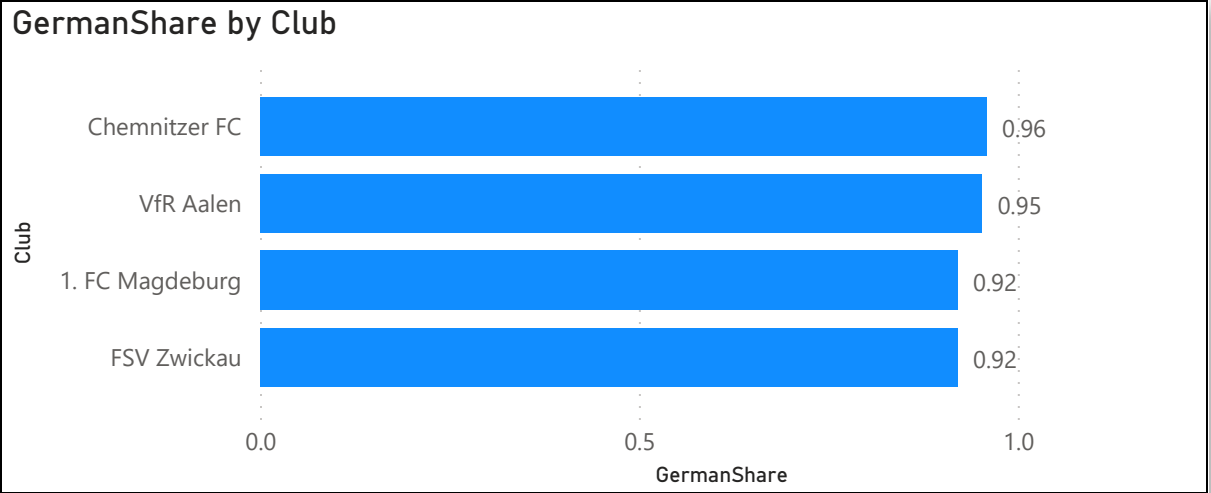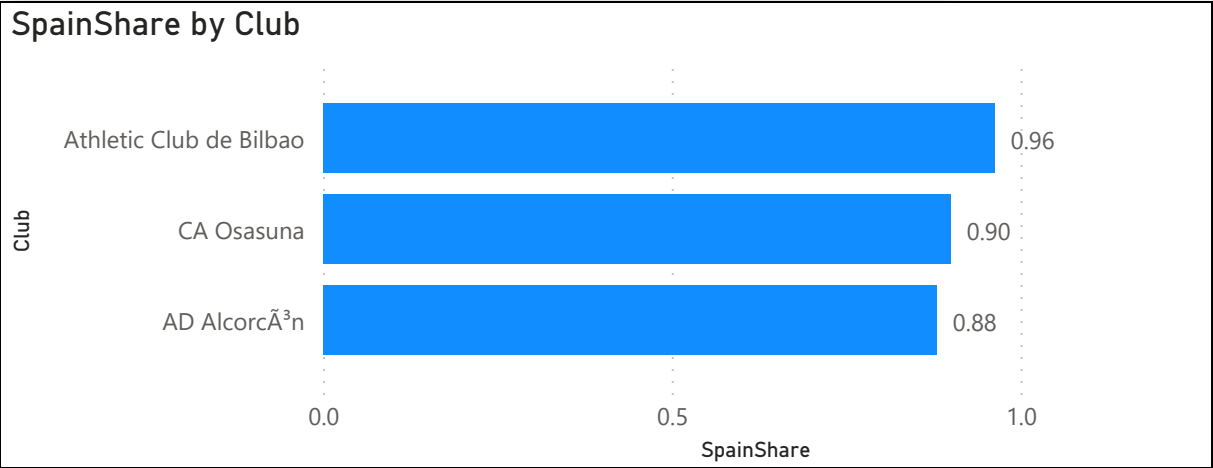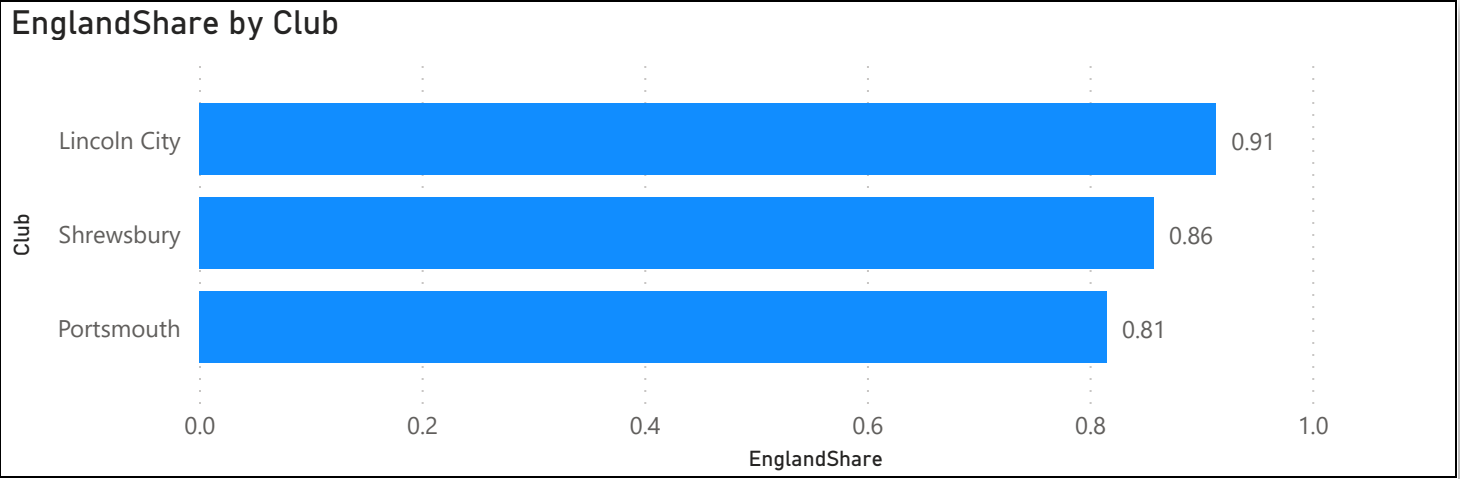· **There are 91 right-wingers whose average wage is 19630 pounds.**

Top 5 players for every preferred position in terms of overall as well as potential points. Who were the best in 2018? Who were destined to be the future superstars in that year?

Preferred Positions

CAM

Sum of Overall and First Name by Column1

Sum of Potential and First Name by Column1

- There are two figures in the above page. The slicer helps select the position of the player. On selecting the positions, the top 5 players by overall rating and potential for the corresponding positions are displayed on each of the bar plot respectively. While the x-axis displays the column name, the tooltip displays the player name. The players with a single preferred position have been included in this graphic.
- The best players of 2018 by ratings are: Sergio Ramos (CB)- 90 points, M. Neuer (GK)- 92 points, Neymer (LW)- 92 points, L. Messi (RW)- 93 points, L. Suairez (ST)- 92 points
- The future superstars based on potential includes: R Varane (CB) 92 points, G. Donnarumma (GK) - 94 points, T. Lemar (LM)- 91 points, Neymer (LW)- 94 points, Bernardo Silva (RM)- 91 points, L. Messi (RW)- 93 points, K. Mbappa (ST)- 94 points
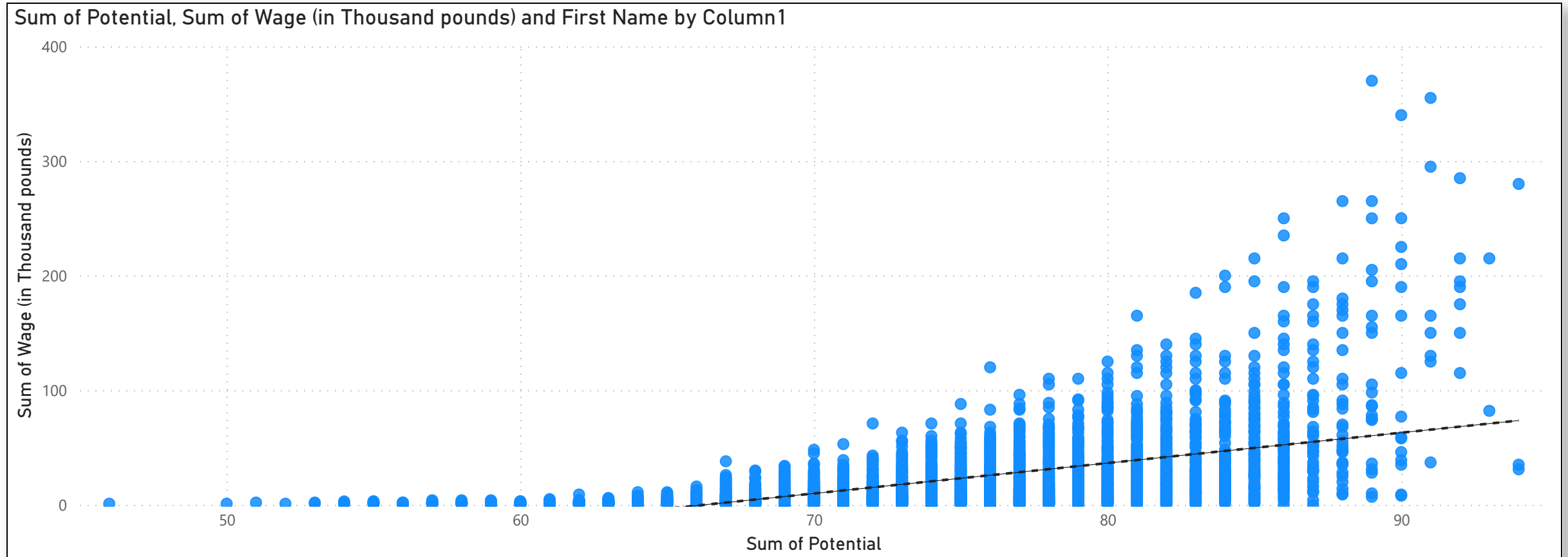
Which club(s) have the maximum share of players from England? Which club(s) have the maximum share of players from Spain? Which club(s) have the maximum share of players from Germany?

Club	EnglandShare	SpainShare	GermanShare
SSV Jahn Regensburg			0.82
1. FC Heidenheim			0.81
1. FC KÃ¶ln		0.03	0.57
1. FC Kaiserslautern	0.03		0.52
1. FC Magdeburg			0.92
1. FC NÃ¼rnberg			0.57
1. FC Union Berlin		0.04	0.59
1. FSV Mainz 05		0.03	0.47
Ä°stanbul BaÅŸakÅŸehir FK			0.04
Aberdeen	0.21		
Total	**0.09**	**0.06**	**0.06**

EnglandShare by Club

SpainShare by Club

GermanShare by Club

The club that has maximum share of players from England is Lincoln City with 91% English players. The club that has maximum share of players from Spain is Athletic Club de Bilbao with 96% Spanish players. The club that has maximum share of players from Germany is Chemnitzer FC with 96% German players.
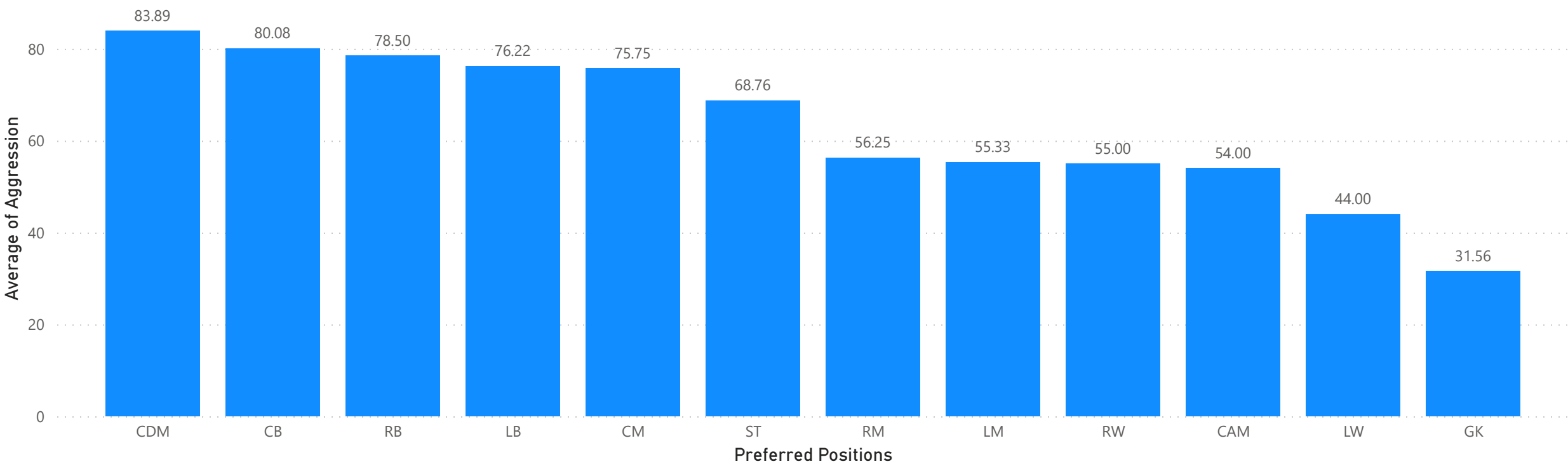
Are the wages of a player influenced by the potential of a player? Check it out for players with age Between 16 to 28?

Sum of Potential, Sum of Wage (in Thousand pounds) and First Name by Column1

From the above plot it is clear that between the age of 16 to 28, there is a direct positive correlation between wages and player potential.

Do Strikers score higher on "Aggression" than defenders do? Group both the set of players (from an overall score of 80 to 85) and compare their average aggression levels. Which particular position has the highest aggression as a given (players with an overall score of 80 to 90)?
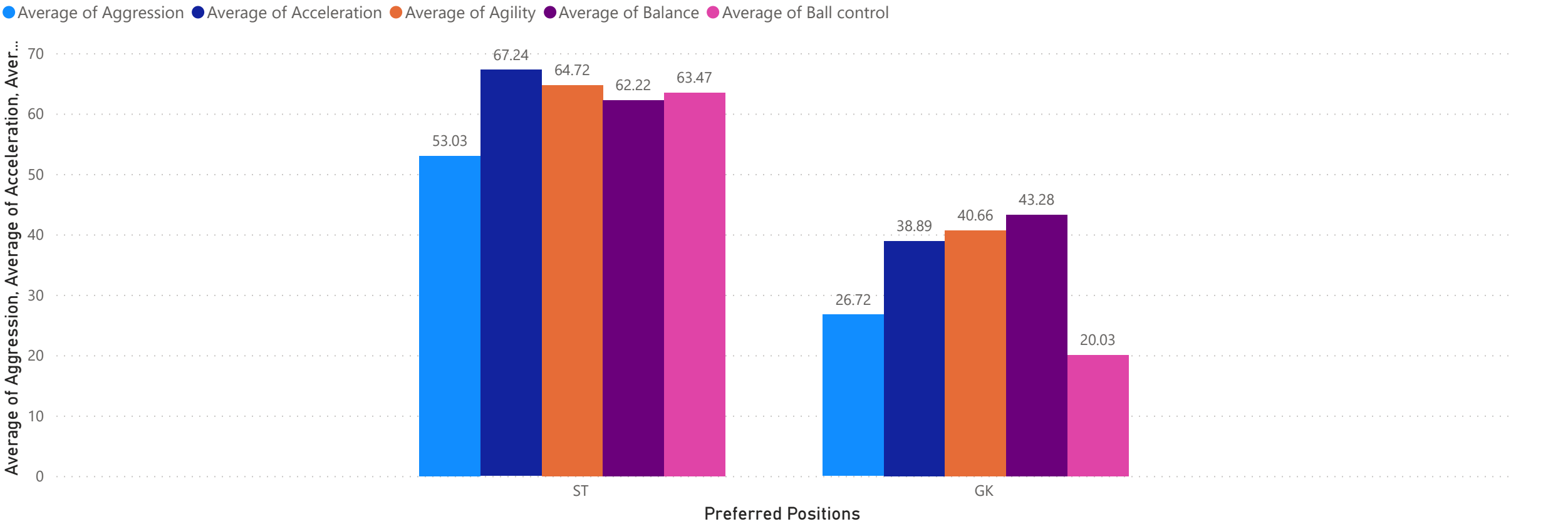
Average of Aggression by Preferred Positions

Strikers on average do not have higher aggression levels than defenders. The defending positions such as CDM, CB, RB and LB all have higher average aggression levels than that of striker. CDM position has the highest average aggression of 83.89.

How based on the positional data, players are profiled for different roles/classes. Plot Aggression, Acceleration, Agility, Balance and Ball Control for strikers and Goal Keepers in a single line/Bar plot to understand the positional difference
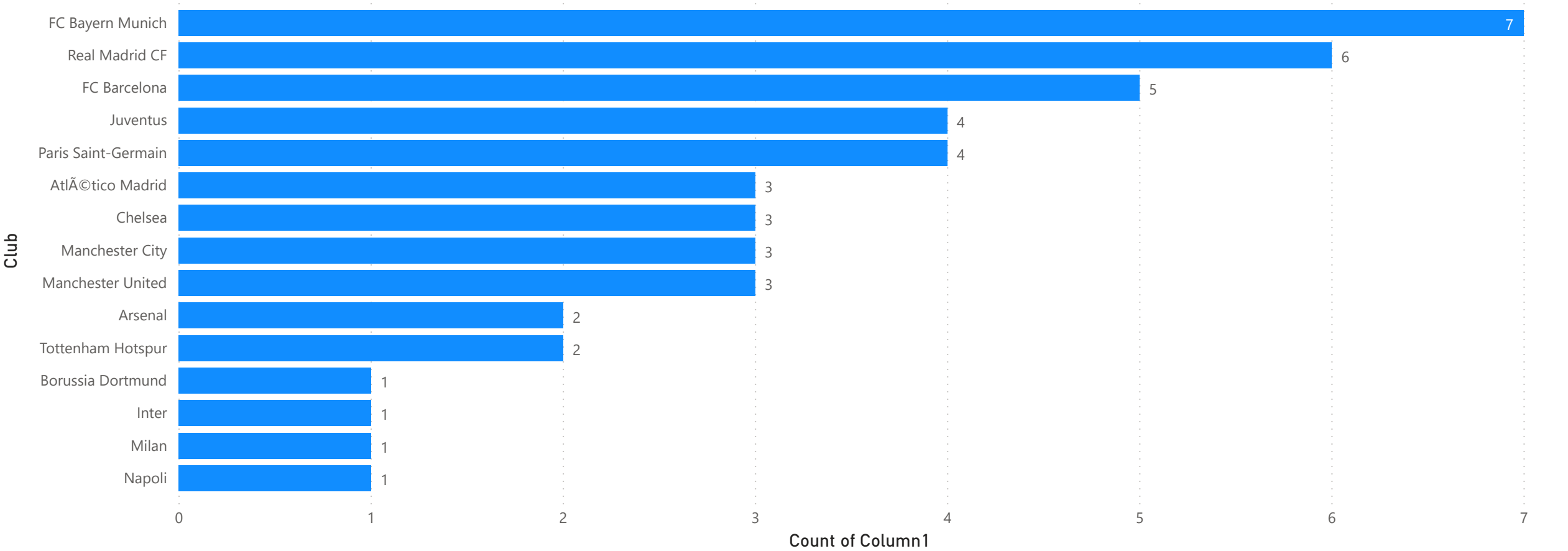
Average of Aggression, Average of Acceleration, Average of Agility, Average of Balance and Average of Ball control by Preferred Positions

- Average of Aggression
- Average of Acceleration
- Average of Agility
- Average of Balance
- Average of Ball control

The above plot showcases the positional differences between goalkeepers and strikers in terms of agility, aggression, acceleration, balance and ball control. Strikers on average fare better than goalkeepers on all the parameters.

Which clubs consists of the best future players? Consider only the players with Overall <86 and Potential >= 86, plot a graph to show which are the top 10 clubs with most number of best future players
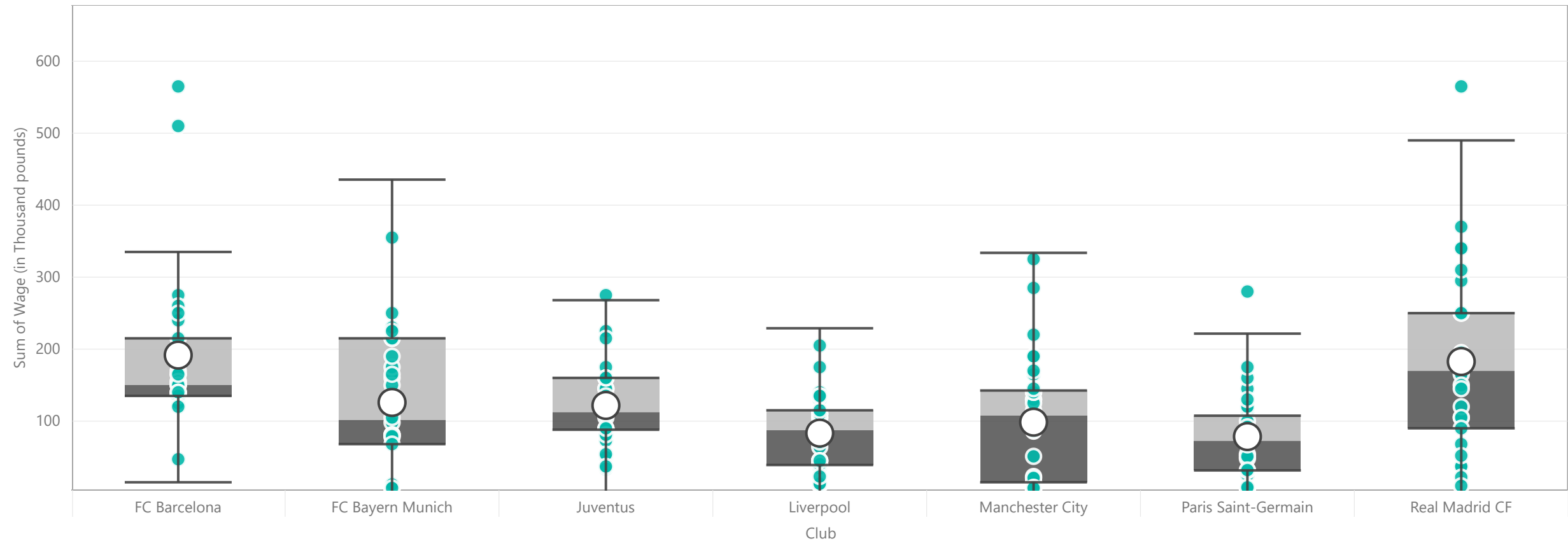
Count of Column1 by Club

The above plot showcases the top clubs with most number of future players with current and potential ratings over 86. FC Bayern Munich has most no. of future players (7), followed by Real Madrid CF (6), FC Barcelona (5) and so on.

How the best clubs in the world pay their players? Create a box plot of wages for FC Barcelona, Real Madrid, Paris Saint Germain, Manchester City, Liverpool, Juventus and Bayern Munich

Sum of Wage (in Thousand pounds) by Name and Club

The above plot shows the distribution of wages across different clubs. Real Madrid has the highest median wage while Paris Saint German has the lowest median wage. The plot for the clubs Real Madrid, Barcelona and Paris Saint German contains some outliers, which are due to high wages claimed by certain players like C. Ronaldo, L. Messi, L. Suarez and Nevmar.