FIFA 19 Player Rating Visualization

Introduction:

As I am a soccer fan, I was very keen to visualize the various abilities a player possesses and how they affect his overall rating or credibility. The dataset has **18207 observations and 89 variables**.

Using the above data, I plan to create visualizations that would help a club finalize a transfer for a highly skilled fast-attacking player.

Explanation of Data:

The dataset consists of two data types which are integer and character. The data set contains no null values. I have clubbed certain columns together depending on their similarities. Those columns are explained in brief:

Variable	Details
Name	This is a character variable that denotes the name of the player
Position	This is a character variable that denotes the position of the player
Nationality	This is a character variable that denotes the nation that the player plays
Age, Height, Weight	These are integer fields that denote the physical attributes of the player
LS, ST, RS, LW, LF, CF, RF, RW, LAM, CAM, RAM, LM, LCM, CM, RCM, RM, LWB, LDM, CDM, RDM, RWB, LB, LCB, CB, RCB, RB	These are character variable that denote the change in overall rating when the player is played at different positions.
Crossing, Finishing, HeadingAccuracy, ShortPassing, Volleys, Dribbling, Curve, FKAccuracy, LongPassing, BallControl, Acceleration, SprintSpeed, Agility, Reactions, Balance, ShotPower, Jumping, Stamina, Strength, LongShots, Aggression, Interceptions, Positioning, Vision, Penalties, Composure, Marking, StandingTackle, SlidingTackle, GKDiving, GKHandling, GKKicking, GKPositioning, GKReflexes	These are numeric variables that describe individual attributes of a player. They assign a number out of 100 to all the mentioned attributes for an individual player

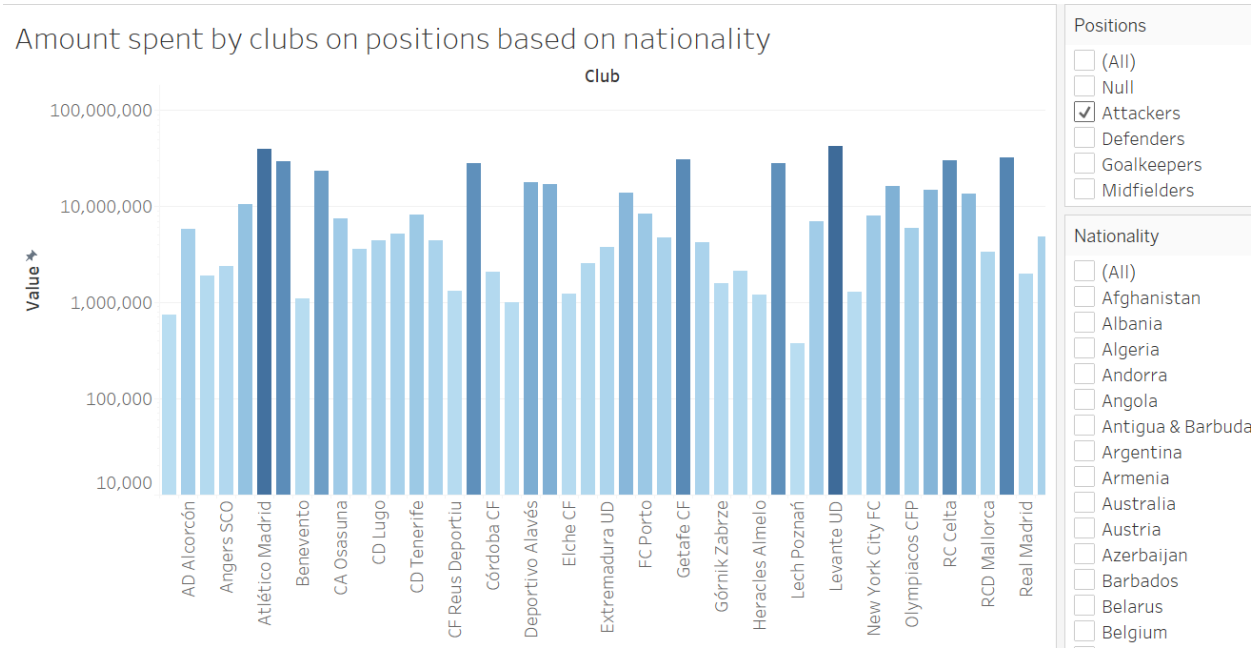
After closely evaluation all the variable, there are certain integers values such as 'International Reputation', 'Weak Foot' and 'Skill Moves' that could be converted into factors as they are value that rate out of a maximum of 5. Similarly, there are characters such as 'Body Type', 'Real Face' which could also be converted to factors as they have 4 body types and yes or no values for display.

Graphical Visualization to find players from transfer market

To shortlist a player, the club will have to consider the following key factors:

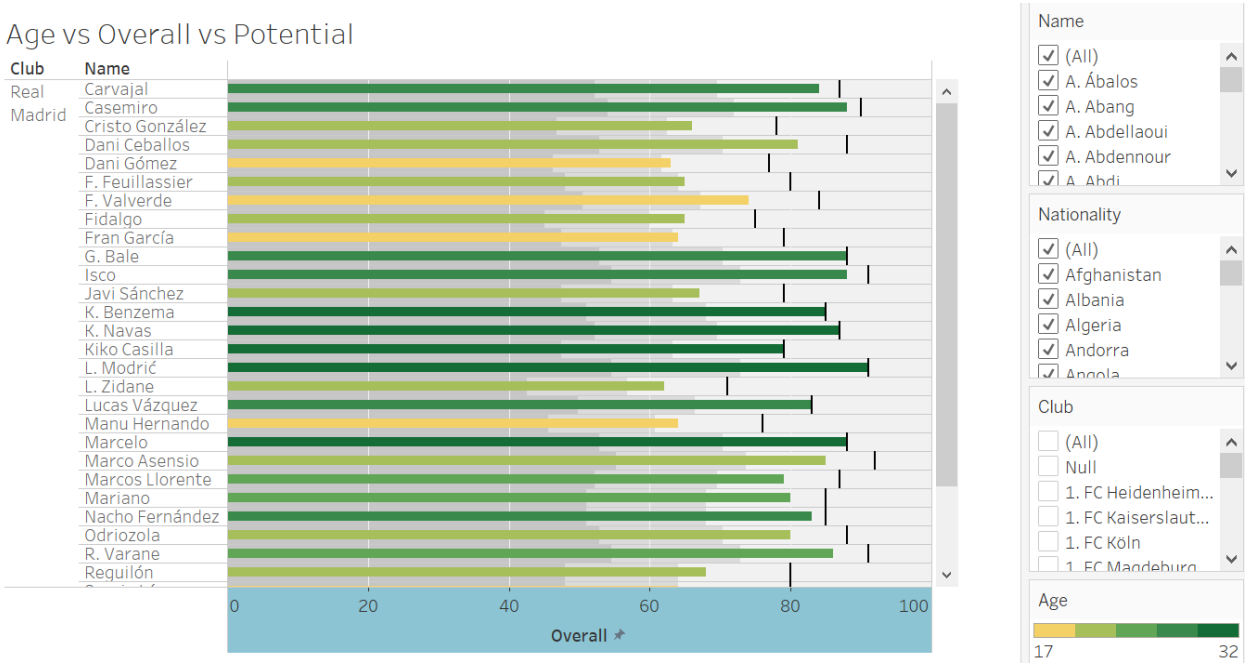
- Budget
- Nationality
- Age
- Player overall rating
- Player individual attributes

1) The club will first give the transfer department an initial budget to complete the transfer. The below graph shows the spending pattern of other teams on Spanish players for attacking positions. It can help the transfer department to quote a transfer budget based on the spending pattern of other teams for the required position based on a player's nationality.



2) After finalizing the initial budget, the transfer department can investigate the formation of other teams to identify the attacking position and possible options. The below graph depicts the player's overall and potential ratings with their positions for different teams. As you can see, Martial is a right forward with an overall rating of 84 and potential rating of 90 whereas Lukaku is a center striker with overall and potential rating as 87 and 89 respectively. This graph can be created for multiple teams. It enables the club to picturize the positions and the ratings of the players in a very easy way. It could help the club to make their analysis by considering the players potential ratings that denotes the best the player could get.

3) Age, overall and potential rating are one of the most important factors to finalize a transfer. Using the below graph, it can be identified that most of the young players have a scope to develop their potential and increase their rating whereas the old players have their overall and potential rating the same. This could help the club look at or invest more in the youth as this could help the team earn great talents.



4) Once the transfer department has identified the age group and overall ratings, the department will them consider the individual characteristics of an attacking player. If a club has shortlisted

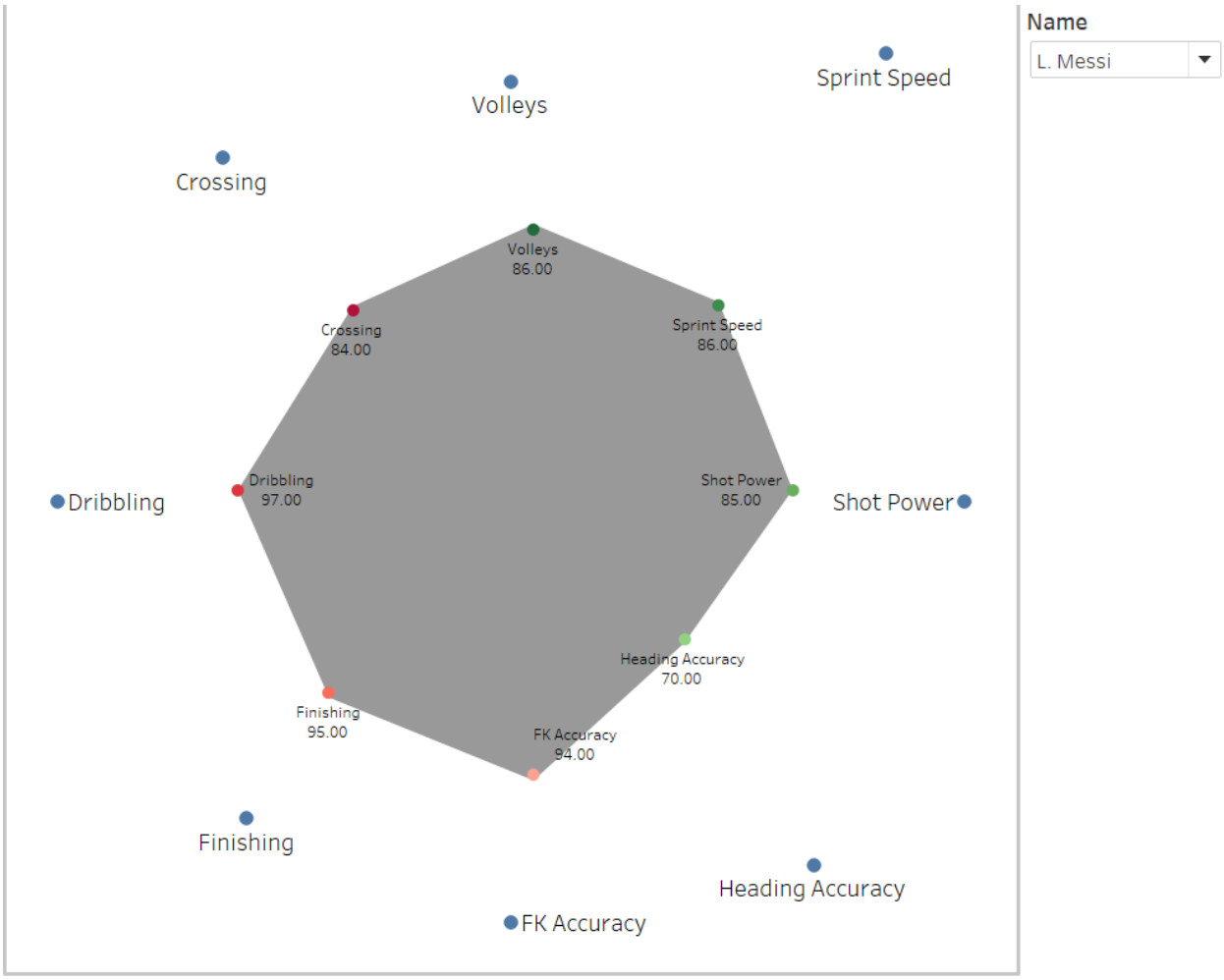
certain players and needs details about their characteristics, this graph can be the most useful. The graph shows players attribute ratings.

The ratings are as follows:

- Crossing
- Volley
- Sprint Speed
- Dribbling
- Shot Power
- Finishing
- FK Accuracy
- Heading Accuracy

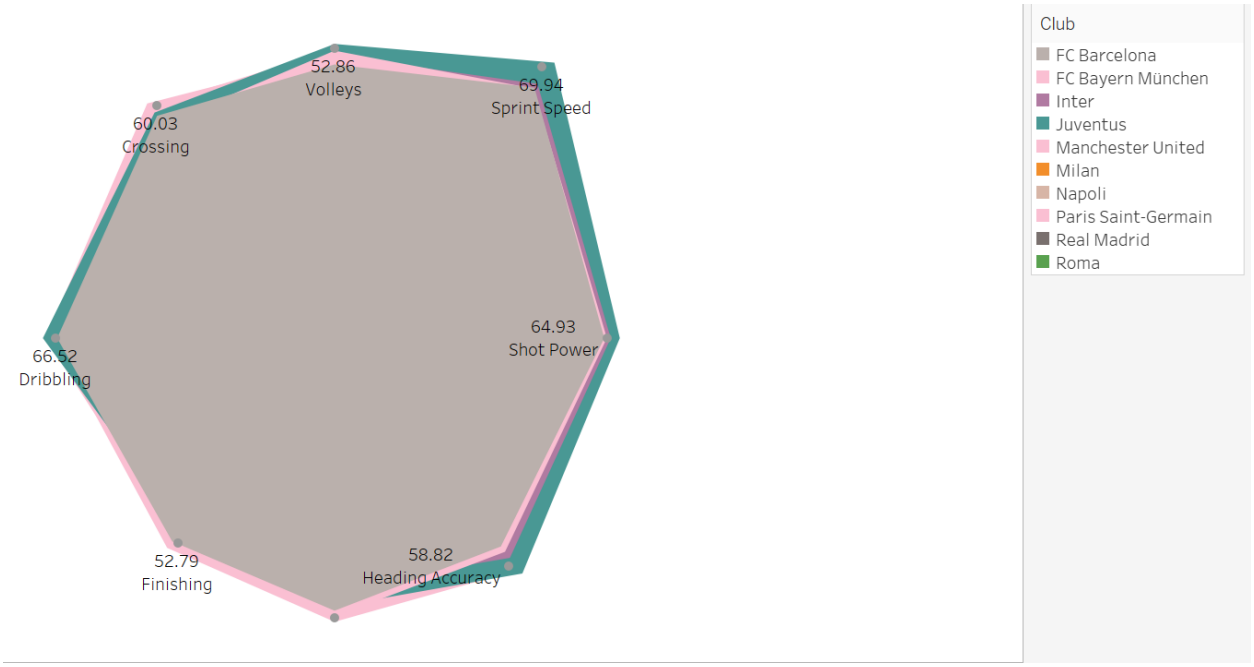
These attributes are selected as the club is looking for a highly skilled fast-attacking player.

The radar graph was the best choice to display the above-mentioned attributes in a very simple and concise way. The graph shows characteristics of Lionel Messi. Messi can be identified as one of the best players as his individual attributes are very high with Dribbling of 97, FK accuracy of 94, Finishing of 95, etc.

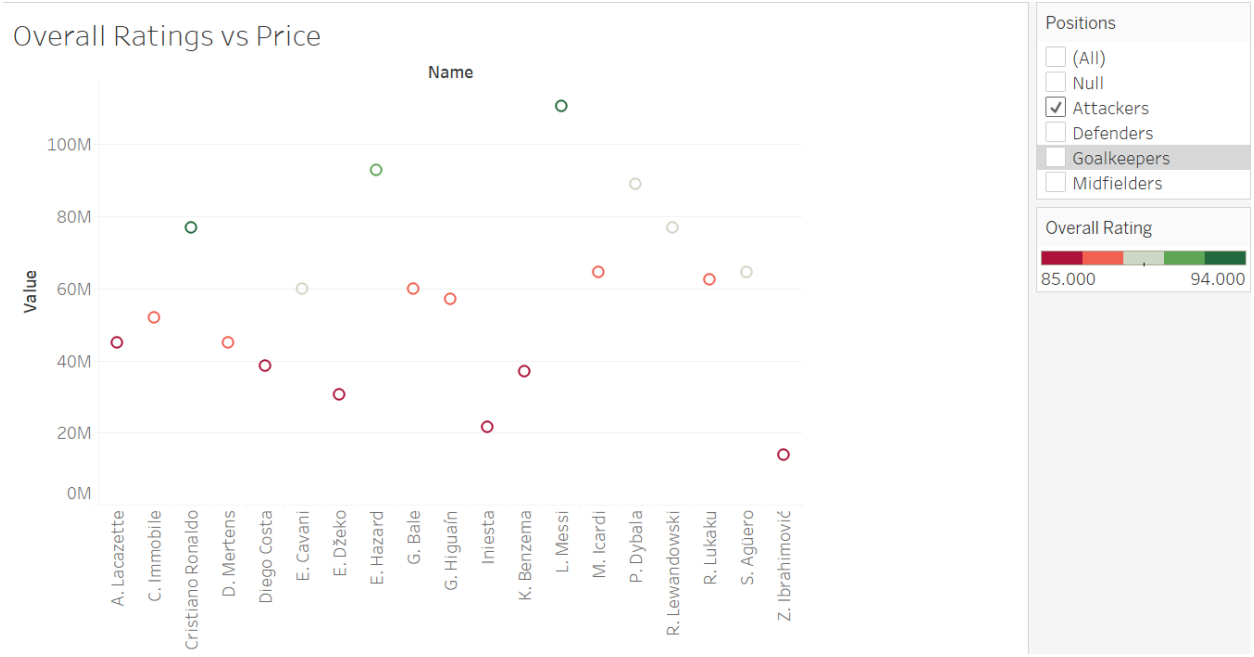


5) The next graph shows the above-mentioned attributes for the top 10 teams based on the average overall ratings of those attributes.

   This graph can help the transfer department with the averages of different player attributes of other teams. This can help the club to finalize a player for the team so that they can match up or become better than the other teams.



6) Finally, the transfer department can also get a list of top attacking players with an average rating equal to or above 85 and their value. This can help them compare the rating with value and select the best candidate. It will also give the department a brief idea on the amount they should be spending for a high rated attacker.



Conclusion

Looking at the above graphs, the transfer department can easily shortlist and finalize the transfer of the player for the club depending on the various set criterias.