# FINAL EXAM
CDA 500
BUILDING YOUR OWN DATA-DRIVEN STORY

The dataset comprises of details about footballers that includes basic personal info, financial analysis and performance based. These include name, overall, position, height, nationality and further more.

The ability to interpret and visualize the data can be beneficial to people in the sports field, which includes Club-managers, analysts, agents, coaches or even the fans. The way I have put visualization charts is to represent the use for the target audience.

ANALYSIS
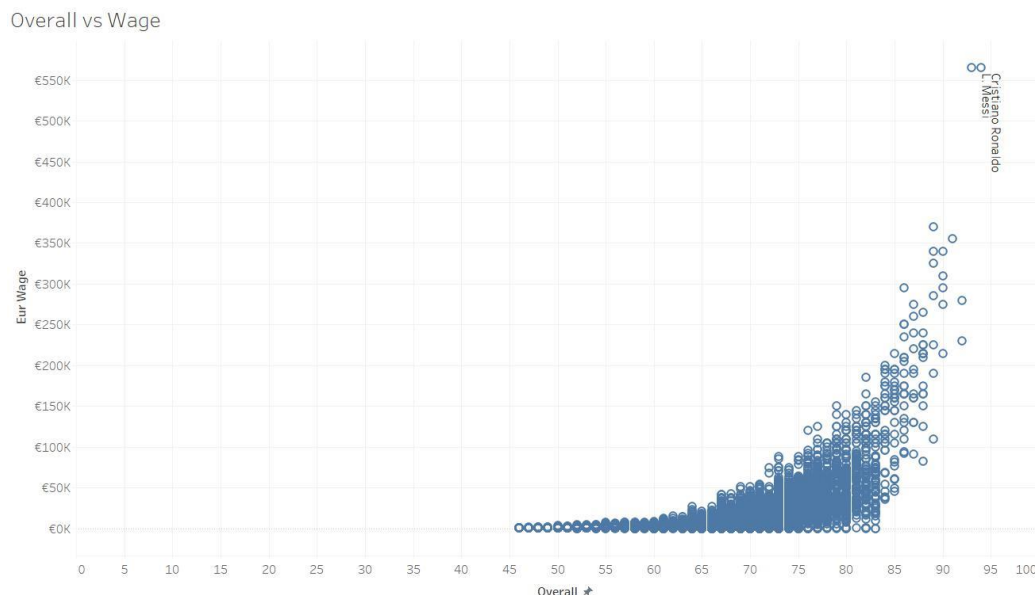
The scatter-plot compares between the wage with overall of the players. Since these attributes are correlated and can be said that the wage is dependent of the overall of the player. Overall-rating of a player is basically the combination of the traits that he showcases in the pitch.

So based on the ratings their weekly wages are drafted to their contracts. It is evident from the graph that the players with the highest ratings Cristiano Ronaldo and L. Messi respectively earns the most wage and it is clearly evident that player who are rated highly does earn a plenty of money.

The target audience includes clubs, player's agent who are involved in drafting contract and interested in signing players.

Age Vs Value
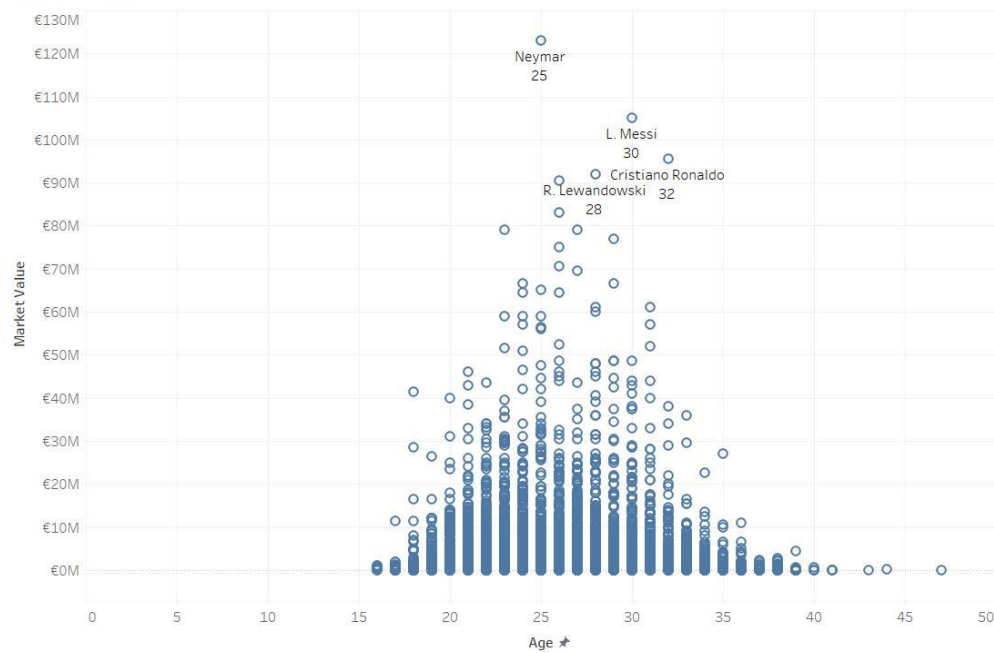
Age plays a vital role in case a professional athlete's career since it is considered as the indicator of investments for clubs & teams and. Football is no exception to that as player's age predominantly impacts his market value. Players between age of 25-35 has a higher market value since they tend to attain their peak form during this duration. The top-rated players are displayed with age shows prominence in ratings.
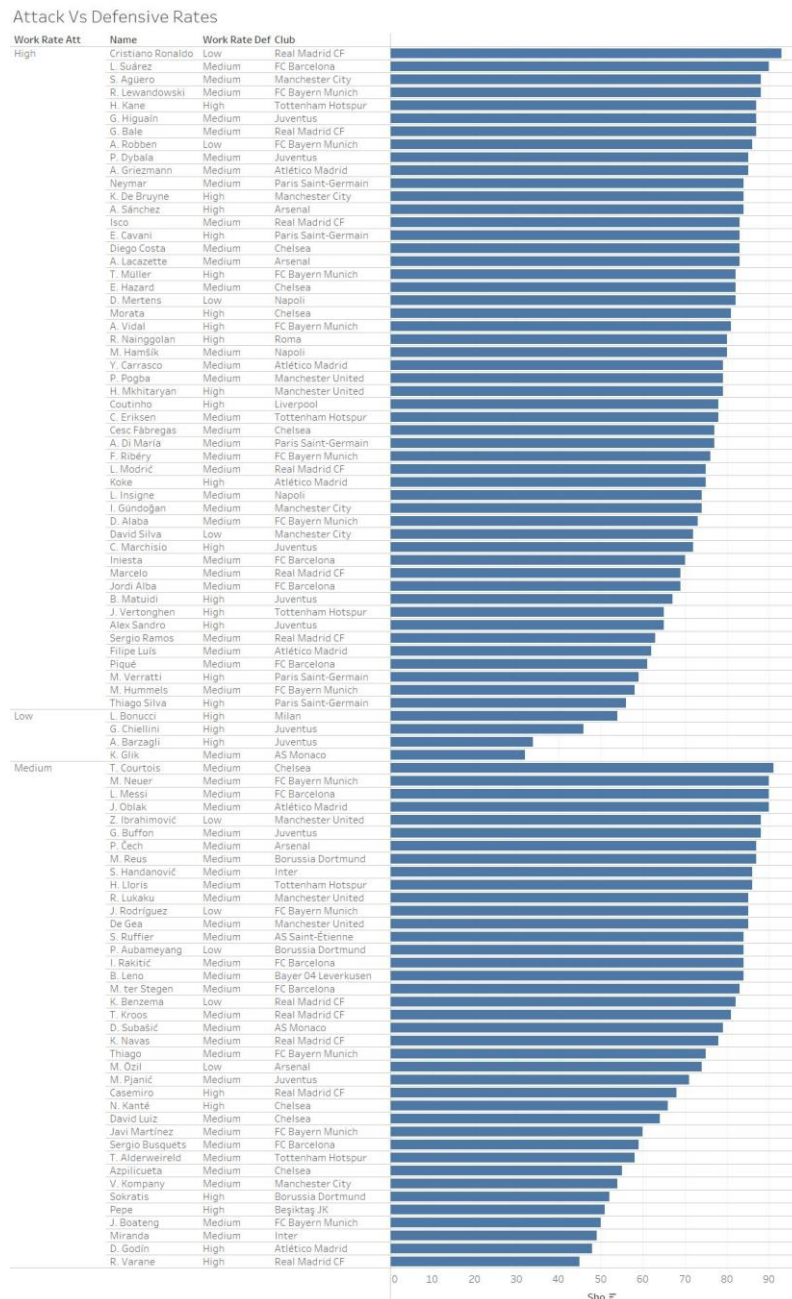
The age-value and overall-wage helps a Football-Club in deciding to invest for a player making them the audience.
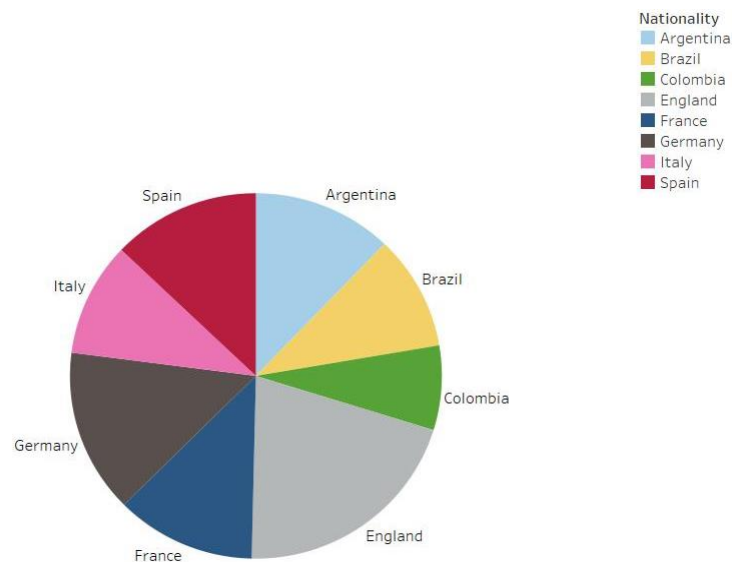
It is better and a smart decision to scout a player in an early stage rather than to sign or loan player. Signing in their market value is not only expensive but takes time for the player to adapt to the new

environment. Hence signing them in early stage is not only cost efficient but also helps the club to groom the player in such a way that the club desires.

By using the country wise distribution of current players can help in finding the potential talents in the respective nationality. Utilizing this pie chart countries England, France and Spain shows vary promising values.

Attack Vs Defensive Rates

| Work Rate Att	Name	Work Rate Def	Club
High	Cristiano Ronaldo	Low	Real Madrid CF
	L. Suárez	Medium	FC Barcelona
	S. Agüero	Medium	Manchester City
	R. Lewandowski	Medium	FC Bayern Munich
	H. Kane	High	Tottenham Hotspur
	G. Higuaín	Medium	Juventus
	G. Bale	Medium	Real Madrid CF
	A. Robben	Low	FC Bayern Munich
	P. Dybala	Medium	Juventus
	A. Griezmann	Medium	Atlético Madrid
	Neymar	Medium	Paris Saint-Germain
	K. De Bruyne	High	Manchester City
	A. Sánchez	High	Arsenal
	Isco	Medium	Real Madrid CF
	E. Cavani	High	Paris Saint-Germain
	Diego Costa	Medium	Chelsea
	A. Lacazette	Medium	Arsenal
	T. Müller	High	FC Bayern Munich
	E. Hazard	Medium	Chelsea
	D. Mertens	Low	Napoli
	Morata	High	Chelsea
	A. Vidal	High	FC Bayern Munich
	R. Nainggolan	High	Roma
	M. Hamšík	Medium	Napoli
	Y. Carrasco	Medium	Atlético Madrid
	P. Pogba	Medium	Manchester United
	H. Mkhitaryan	High	Manchester United
	Coutinho	High	Liverpool
	C. Eriksen	Medium	Tottenham Hotspur
	Cesc Fàbregas	Medium	Chelsea
	A. Di María	Medium	Paris Saint-Germain
	F. Ribéry	Medium	FC Bayern Munich
	L. Modrić	Medium	Real Madrid CF
	Koke	High	Atlético Madrid
	L. Insigne	Medium	Napoli
	I. Gündoğan	Medium	Manchester City
	D. Alaba	Medium	FC Bayern Munich
	David Silva	Low	Manchester City
	C. Marchisio	High	Juventus
	Iniesta	Medium	FC Barcelona
	Marcelo	Medium	Real Madrid CF
	Jordi Alba	Medium	FC Barcelona
	B. Matuidi	High	Juventus
	J. Vertonghen	High	Tottenham Hotspur
	Alex Sandro	High	Juventus
	Sergio Ramos	Medium	Real Madrid CF
	Filipe Luís	Medium	Atlético Madrid
	Piqué	Medium	FC Barcelona
	M. Verratti	High	Paris Saint-Germain
	M. Hummels	Medium	FC Bayern Munich
	Thiago Silva	High	Paris Saint-Germain
Low	L. Bonucci	High	Milan
	G. Chiellini	High	Juventus
	A. Barzagli	High	Juventus
	K. Glik	Medium	AS Monaco
Medium	T. Courtois	Medium	Chelsea
	M. Neuer	Medium	FC Bayern Munich
	L. Messi	Medium	FC Barcelona
	J. Oblak	Medium	Atlético Madrid
	Z. Ibrahimović	Low	Manchester United
	G. Buffon	Medium	Juventus
	P. Čech	Medium	Arsenal
	M. Reus	Medium	Borussia Dortmund
	S. Handanović	Medium	Inter
	H. Lloris	Medium	Tottenham Hotspur
	R. Lukaku	Medium	Manchester United
	J. Rodríguez	Low	FC Bayern Munich
	De Gea	Medium	Manchester United
	S. Ruffier	Medium	AS Saint-Étienne
	P. Aubameyang	Low	Borussia Dortmund
	I. Rakitić	Medium	FC Barcelona
	B. Leno	Medium	Bayer 04 Leverkusen
	M. ter Stegen	Medium	FC Barcelona
	K. Benzema	Low	Real Madrid CF
	T. Kroos	Medium	Real Madrid CF
	D. Subašić	Medium	AS Monaco
	K. Navas	Medium	Real Madrid CF
	Thiago	Medium	FC Bayern Munich
	M. Özil	Low	Arsenal
	M. Pjanić	Medium	Juventus
	Casemiro	High	Real Madrid CF
	N. Kanté	High	Chelsea
	David Luiz	Medium	Chelsea
	Javi Martínez	Medium	FC Bayern Munich
	Sergio Busquets	Medium	FC Barcelona
	T. Alderweireld	Medium	Tottenham Hotspur
	Azpilicueta	Medium	Chelsea
	V. Kompany	Medium	Manchester City
	Sokratis	High	Borussia Dortmund
	Pepe	High	Beşiktaş JK
	J. Boateng	Medium	FC Bayern Munich
	Miranda	Medium	Inter
	D. Godín	High	Atlético Madrid
	R. Varane	High	Real Madrid CF

0 10 20 30 40 50 60 70 80 90

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The graph does look intense but in putting this into use can aid in organizing the entire squad of the club. A *high* attacking work rate combined with the overall rating implies that the player will be in all your attack moves so using that to the advantage and the players can be played in the position based on the work-rate they possess.

It helps in tackling the resources present in the squad and utilizing them to the maximum potential.

MVP

Name
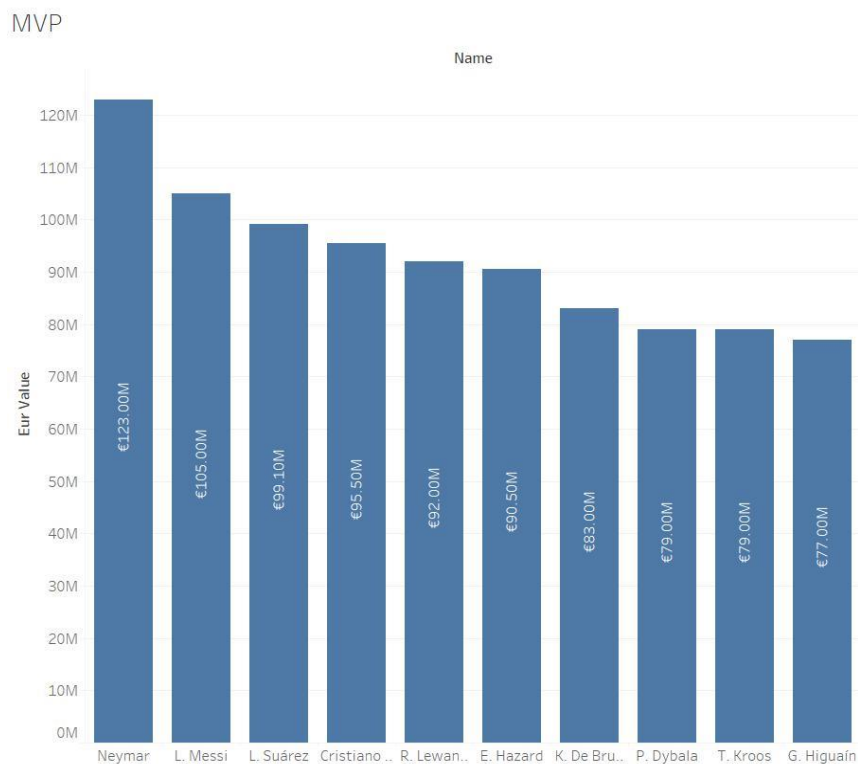
The sheet explains the most valuable players in the market that is the value they possess based on their performance age and other criteria. It shows top 10 most valuable baller around the globe, helping to take decisions if needed.
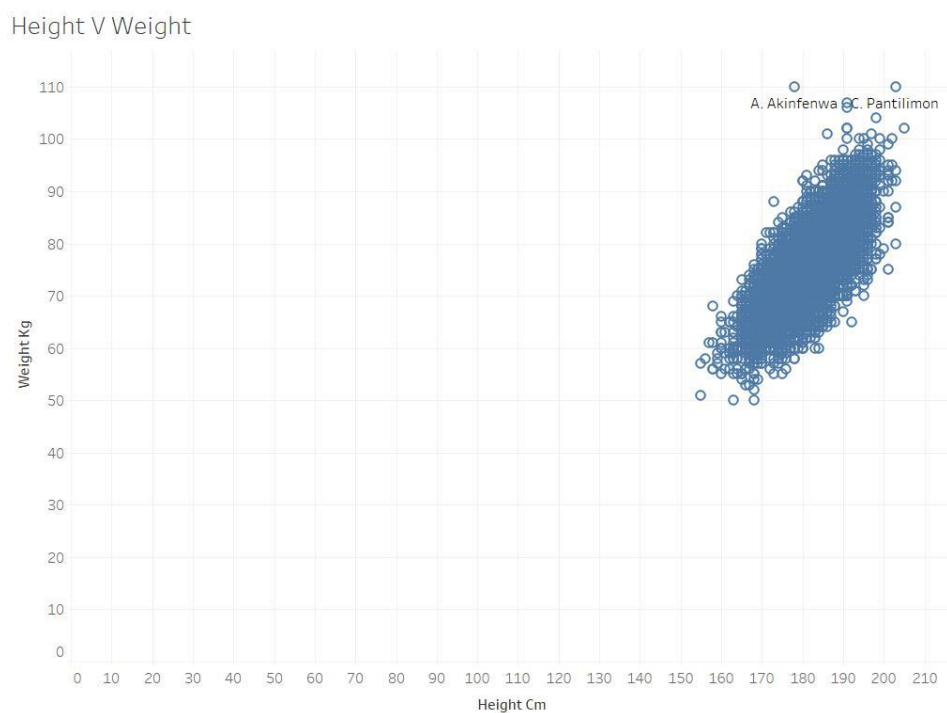
Height V Weight

The plot visualizes the relationship between height and weight of the footballing individuals and reveals that the attributes are correlated and indication that tall people tend to weigh more. Notable players include Akinfenwa and Pantilimon. The chart can be utilized by physical trainers, assistant coaches even dieticians can be assigned to players such that they receive the appropriate amount of training in the aspect that is customized for each and every player.

Top Dribblers
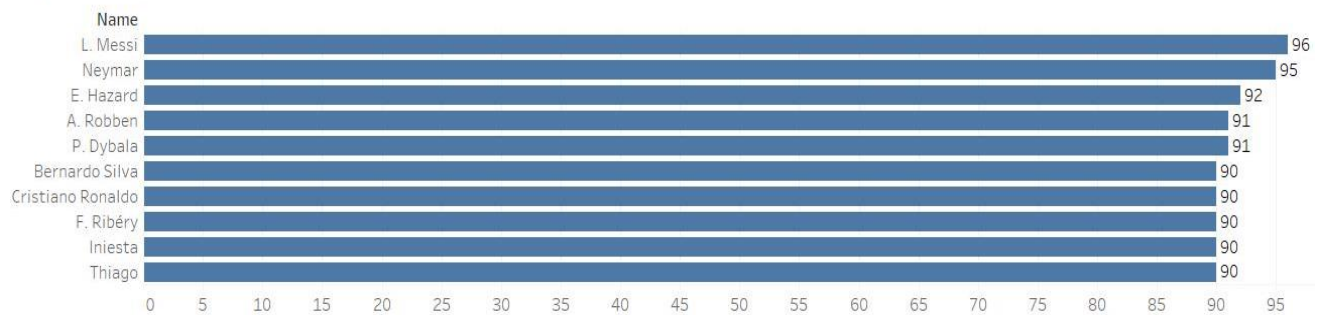
The sheet gives the list of the player who possess the best dribbling in the entire game, which make them lethal in getting past other players with the ball and putting them in positions to score goals.

This stat helps coaches and trainers to put them in use in attacking positions and hence getting the most from the players. This list includes players over 90 dribbling and includes some prominent faces like Ronaldo, Messi, Neymar, Iniesta etc where Messi tops the list with 96 dribbling stat.

DASHBOARD
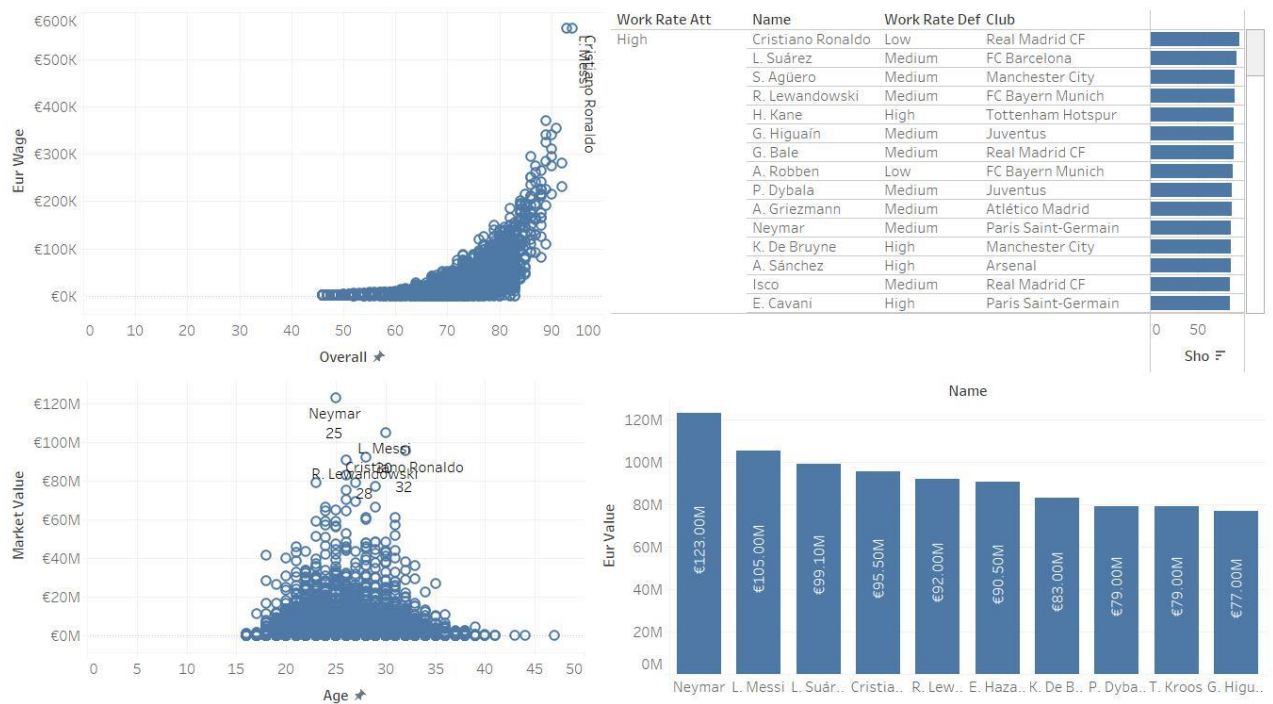
Purpose of using this dashboard is to visualize and analyze value of each and every player based on financial analysis and performance metrics. The main idea of the dashboard is to assist the clubs such that in making the right decision if they can invest in them or not.

The above left scatter plot shows the details of wage vs overall where players like Cristiano Ronaldo and Lionel Messi stand out at top.

The graphs showcase overall vs wage, age vs value and also give details about the most-valuable players across the globe

The arrangement of players based on their Attacking work rate is the best type of visualization chart obtained from this dataset as it acts as source for both manager and the club management, since it can be put to use to buy, sell or trade players and as well as utilizing the players in a proper manner.

The overall, age compared with wage and value and the attack work rate gives insights to the clubs and the management based on the budget and with the money they possess this can help them to buy loan or even sell the players they need to.

REPORT

The development of the visuals charts and the dashboard by using the dataset that comprises the details of footballers financial and performance related analysis. Using this dataset the main information that can be obtained is related to player's overall rating, wage and other physical stats like height and weight. The main objective is to utilize the dataset such that it is completely and extensively useful and used by for our target audience including the clubs, the managers, assistant coaches, scouting managers, physical trainers and fans. Additionally scatter plot comparison correlating the result between wage and overall gives the idea of proximity and the pie chart depicts the similarity between the nationality where all of these falls under Gestalt principles. Similarly continuity is shown by ratings graph that is present. The first scatter plot is to estimate the relation between the age and wages of a player and it is most certain that the wage of a player depends on his overall rating since the overall is clear representation of all the stats that he showcases in the pitch and it is how the players are differentiated and categorised. Also, the market value compared with the age of the player is a vital comparison. These comparison works out well for continuous variables. For the MVP comparison is a bar graph compared with the value is almost a straight forward comparison.

Overly cluttered scatter plot was one of the main issues that was needed to be fixed and to make sure it represents and highlights what is needed. Also adjusting the scale of axis was much more required in order to maintain the clarity and prevent over-crowding of

data points mainly in the scatter plot and providing different colours in each part of the pie chart help to denote and visualize them in a much more elegant manner. Also goal-keepers with inappropriate ratings like high dribbling have be excluded to remove misconception of data.

The age vs value and overall vs wage shows how these attributes are correlated. Using this visualization chart the manager, financial analyst can benefit much before taking any decision on a player acquisitions and wage details. Even sport enthusiasts can get details about their favourite player. These are people who are a part of the audience and other include scouting-managers, physios, strength and development coach.

The purpose of these graphs is to portray a well-defined and an allround dashboard such that communicates the insights of the data. By showcasing and highlighting these visuals results in deep dive into the data and as well as a better understanding by our target audience.