## Data Science

Dashboard using Python

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Batch-3CSE5

Dataset used – FIFA dataset

#### **Documentation**

#### About the dataset

The FIFA dataset contains information about the various players that are present in the video game FIFA 19. The important features present are->

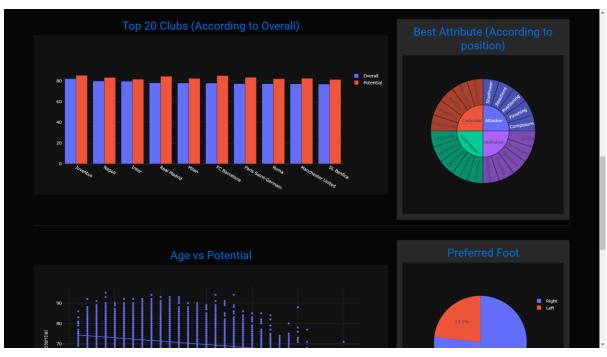
- 1. Name
- 2. Age
- 3. Club of the Player
- 4. Nationality
- 5. Wage
- 6. Value
- 7. Overall (Rating between 0 and 100 depicted how good a player is)
- 8. Potential (Rating between 0 and 100 depicted how good a player can be.)

And other various ratings (out of hundred) about the players such as ShotPower, Passing stats, Shooting etc.

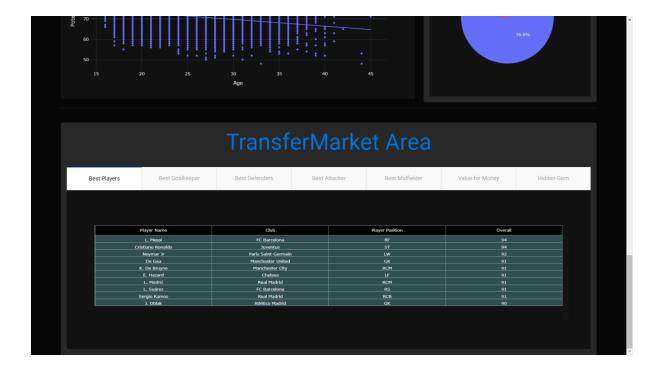
#### Screenshots of the dashboard







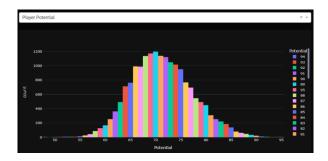


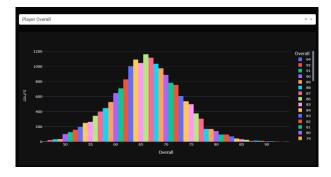


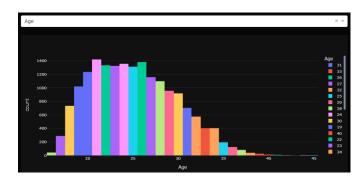
### **Explaining the Dashboard**

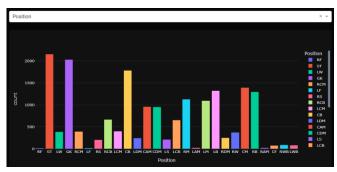


This is the first row of the dashboard and is just the basic information of the data like the number of player, clubs, countries present in the data.









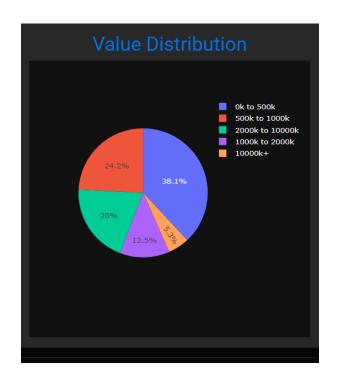
This is the part of the dashboard which represents the distribution of data in 4 different columns — Player Potential, Player Overall, Age, and Player Position respectively. It can be seen that Overall and Age is a normally distributed as most players are usually average and there are only a few professional players that are very bad or very good. But if we see the age histogram, we see that is positively skewed as when players tend to get older they and are unable to play they retire.



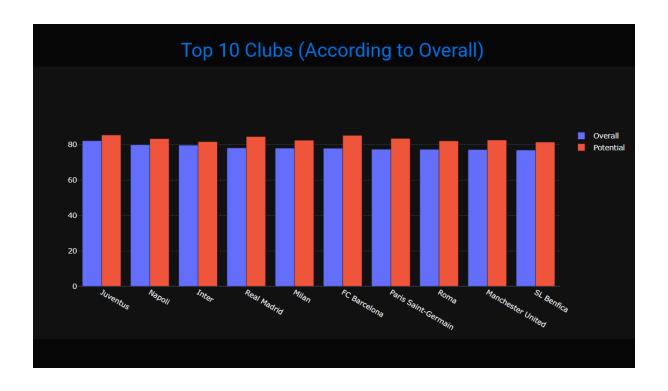
The above is a Pie chart representing the player wage distribution. We can see that most of the players don't receive that high a wage that we think football players receive. Only 1% of the players receive wages that exceed 100 thousand. Most receive wages between 1 and 10 thousand.



This is a geographic scatter plot representing the countries with the most FIFA players and their count. It can be seen that football is mostly popular in the continent of Europe where 11 of the 20 countries displayed lie.



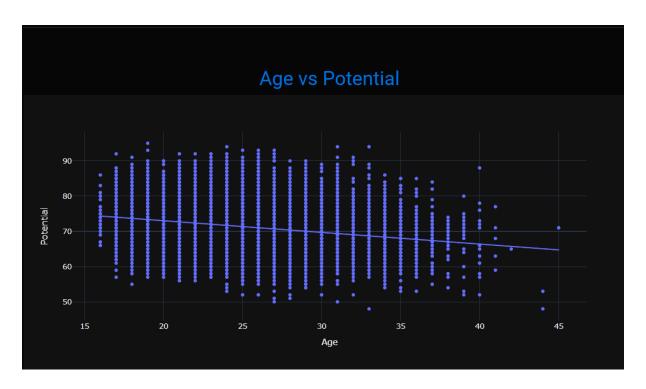
The above is a Pie chart representing the player Value distribution. We can see that only 5.3% of the players have a value within a million euros that, but only about 1% of the 5.3% of players are recognized by many.



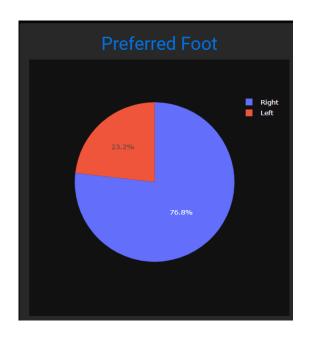
This is a bar chart of the top 10 teams according to the average overall of the players. The overall is plotted with the Potential which is the value of what the overall can be in the future. We can see that even though Barcelona have a lesser overall compared to Milan, Napoli, Inter and Real Madrid, their potential is greater than all of them.



The above is a sunburst Chart of the representing what all attributes are the most important for each position. It was found by finding the highest correlation values with overall for each respective position.



This is a scatter plot between the age and Potential in the dataset. The line tries to capture the essence of the scatter plot and has a negative slope. This seems to prove that Potential decreases with age which makes sense as the younger you are, you have more time to develop your skills and reach your potential, but as you get older your potential keeps decreasing.



This is a pie chart representing the right footed and the left footed players in FIFA game. It can be seen that almost 77% of players in FIFA are right footed and left footed players are scarce. This is the reason why left footed players are actually payed more than the right footed players.

	Transfe	erM	arke	et Area		
Best Goalkeeper	Best Defenders	Best At	tacker	Best Midfielder	Value for Money	Hidden Gem
yer Name	Club			Player Position	Overall	
L. Messi	FC Barcelona			RF	94	
ano Ronaldo	Juventus				94	
De Bruyne	Manchester City			RCM		
	Chelsea			LF	91	
. Hazard						
. Modrić	Real Madrid			RCM	91	
				RCM RS RCB	91 91 91	
	yer Name L. Messi ano Ronaldo eymar Jr De Gea	Best Goalkeeper Best Defenders  yer Name Club L. Messi FC Barcelona ano Ronaldo Juventus eymar Jr Paris Saint-Germain Be Gea Manchester United	Best Goalkeeper Best Defenders Best At  yer Name Club L. Messi FC Barcelona and Ronaldo Juventus eymar Jr Paris Saint-Germain De Gea Mandrester United	Best Goalkeeper Best Defenders Best Attacker  yer Name Club L. Messi FC Barcelona and Bonaldo Juventus eymar Jr Paris Saint-Germain De Goa Manchester United	yer Name         Club         Pfayer Position           L. Messi         FC Barcelona         BF           ano Ronaldo         Juventus         ST           eymar Jr         Paris Saint-Germain         LW           be Gea         Manchester United         GK	Best Goalkeeper         Best Defenders         Best Attacker         Best Midfielder         Value for Money           Vyer Name         Club         Player Position         Overall           L. Messi         FC Barcelona         RF         94           and Bonaldo         Juventus         5T         94           eymar Jr         Paris Saint-Germain         LW         92           De Gea         Manchester United         GK         91

Best Players         Best Goalkeeper         Best Defenders         Best Attacker         Best Midfielder         Value for Money         Hidden Gem           Player Name         Club         Player Position         Overall           De Gea         Manchester United         GK         91           J. Oblak         Atlético Nadrid         GK         90           M. ter Stogen         FC Barcelona         GK         89           T. Courtols         Real Madrid         GK         89           M. Neuer         FC Bayerm Minchen         GK         89           H. Uoris         Tottenham Hotspur         GK         88           S. Handanovič         Inter         GK         88           G. Buffon         Paris Saint-Germain         GK         88           K. Navas         Real Madrid         GK         87           Ederson         Manchester City         GK         86		Transf	erMarke	et Area		
De Gea         Manchester United         GK         91           J. Oblák         Aldérico Madrid         GK         90           M. ter Stogen         FC Barcelona         GK         89           T. Courtois         Real Madrid         GK         89           M. Neuer         FC Bayern München         GK         89           H. Luris         Tottenham Hotspur         GK         88           S. Handanovič         Inter         GK         88           G. Buffon         Paris Saint-Cermaln         GK         88           K. Navas         Real Madrid         GK         87	Best Players Best Goalkeeper	Best Defenders	Best Attacker	Best Midfielder	Value for Money	Hidden Gem
De Gea         Manchester United         GK         91           J. Oblak         Attético Madrid         GK         90           M. ter Stegen         FC Barcelona         GK         89           T. Courtois         Real Madrid         GK         89           M. Neuer         FC Bayern München         GK         89           H. Luris         Tottenham Hotspur         GK         88           S. Handanovič         Inter         GK         88           G. Buffon         Paris Saint-Germaln         GK         88           K. Navas         Real Madrid         GK         87	Player Name	Club		Player Position	Overall	
M. ter Stegen         FC Barcelona         GK         89           T. Courtols         Real Madrid         GK         89           M. Neuer         FC Bayern Minchen         GK         89           H. Lloris         Tottenham Hotspur         GK         88           S. Handanovič         Inter         GK         88           G. Buffon         Parls Saint-Cermain         GK         88           K. Navas         Real Madrid         GK         87		Manchester United			91	
T. Courtois         Real Madrid         GK         89           M. Neuer         FC Bayern München         GK         89           H. Uoris         Tottenham Hotspur         GK         88           S. Handanovič         Inter         GK         88           G. Biffon         Paris Saint-Germaln         GK         88           K. Navas         Real Madrid         GK         87	J. Oblak	Atlético Madrid		GK	90	
M. Neuer         FC Bayern München         GK         89           H. Lloris         Tottenham Hotspur         GK         88           S. Handanovič         Inter         GK         88           G. Buffon         Parls Saint-Germain         GK         88           K. Navas         Real Madrid         GK         87	M. ter Stegen	FC Barcelona		GK	89	
H. Lloris         Totterham Hotspur         GK         88           S. Handanovič         Inter         GK         88           G. Buffon         Paris Saint-Germain         GK         88           K. Navas         Real Madrid         GK         87	T. Courtois	Real Madrid		GK	89	
S. Handanovič         Inter         GK         88           G. Buffon         Paris Saint-Cermain         GK         88           K. Navas         Real Madrid         GK         87	M. Neuer	FC Bayern München		GK	89	
G. Buffon         Paris Saint-Germain         GK         88           K. Navas         Real Madrid         GK         87	H. Lloris	Tottenham Hotspur		GK	88	
K. Navas Real Madrid GK 87						
Ederson Manchester City GK 86						
	Ederson	Manchester City		GK	86	

		Transf	erMarke	et Area		
Best Players	Best Goalkeeper	Best Defenders	Best Attacker	Best Midfielder	Value for Money	Hidden Gem
	Player Name	Club		Player Position	Overall	
	Player Name Sergio Ramos	Club Real Madrid		Player Position RCB	Overall 91	
	•					
	Sergio Ramos	Real Madrid		RCB	91	
	Sergio Ramos D. Godin	Real Madrid Atlético Madrid		RCB CB	91 90	
	Sergio Ramos D. Godín G. Chiellini	Real Madrid Atlético Madrid Juventus		RCB CB LCB	91 90 89	
	Sergio Ramos D. Godin G. Chiellini M. Hummels	Real Madrid Atlético Madrid Juventus FC Bayern München		RCB CB LCB LCB	91 90 89 88	
	Sergio Ramos D. Godin G. Chiellini M. Hummels Marcelo	Real Madrid Atlético Madrid Juventus FC Bayern München Real Madrid		RCB CB LCB LCB LB	91 90 89 88 88	
	Sergio Ramos D. Godfn G. Chiellini M. Hummels Marcelo Thiago Silva S. Umtiti K. Koulibaly	Real Madrid Allético Madrid Juventus EC Bayern München Real Madrid Paris Saint-Germain EC Barcelona Napoli		RCB CB LCB LCB LB RCB	91 90 89 88 88	
	Sergio Ramos D. Godin G. Chiellini M. Hummels Marcelo Thiago Silva S. Umtiti	Real Madrid Atlético Madrid Juventus FC Bayern München Real Madrid Paris Saint-Germain FC Barcelona		RCB CB LCB LCB LB RCB RCB	91 90 89 88 88 88	

# TransferMarket Area Best Players Best Goalkeeper Best Defenders Best Attacker Best Midfielder Value for Money Hidden Gem Value for Money Hidden Gem Hidden Gem Player Name L. Messi F. Barcelona F. 94 Cristiano Ronaldo Juventus ST 94 Neymor It Paris Saint-Cermain LW 92 E. Hazard Chelsoa LF 91 L. Sufrez F. C Barcelona RS 91 R. Lewandrowski F. C Bayer München ST 90 P. Dybala Juventus LF 90 P. C Sarcelona RS 91 R. Cavaril Paris Saint-Germain LS 99 S. Aguero Manchester City ST 99 S. Aguero

		Transf	erMarke	et Area		
Best Players	Best Goalkeeper	Best Defenders	Best Attacker	Best Midfielder	Value for Money	Hidden Gem
	Player Name	Club		Player Position	Overall	
	Player Name K. De Bruyne	Club Manchester City		Player Position RCM	Overall 91	
_	K. De Bruyne	Manchester City		RCM	91	
_	K. De Bruyne L. Modrić	Manchester City Real Madrid		RCM RCM	91 91	
	K. De Bruyne L. Modrić T. Kroos David Silva N. Kanté	Manchester City Real Madrid Real Madrid Manchester City Chelsea		RCM RCM LCM LCM LDM	91 91 90 90 89	
	K. De Bruyne L. Modrić T. Kroos David Silva N. Kanté A. Griezmann	Manchester City Real Madrid Real Madrid Manchester City Chelsea Atlético Madrid		RCM RCM LCM LCM LDM CAM	91 91 90 90 89 89	
	K. De Bruyne L. Modrić T. Kroos David Silva N. Kanté A. Griezmann iergio Busquets	Manchester City Real Madrid Real Madrid Manchester City Chelsea Atlético Madrid FC Barcelona		RCM RCM LCM LCM LDM CAM CAM	91 91 90 90 89 89	
	K. De Bruyne L. Modrić T. Kroos David Silva N. Kanté A. Griezmann ergjio Busquets K. Mbappé	Manchester City Real Madrid Real Madrid Manchester City Chelsea Atlético Madrid FC Barcelona Paris Saint-Cermain		RCM RCM LCM LCM LDM CAM CDM RM	91 91 90 90 89 89 89	
	K. De Bruyne L. Modrić T. Kroos David Silva N. Kanté A. Griezmann iergio Busquets	Manchester City Real Madrid Real Madrid Manchester City Chelsea Atlético Madrid FC Barcelona		RCM RCM LCM LCM LDM CAM CAM	91 91 90 90 89 89	

		Transf	erMarke	et Area		
Best Players	Best Goalkeeper	Best Defenders	Best Attacker	Best Midfielder	Value for Money	Hidden Gem
	Player Name	Club		Player Position	Overall	
	D. Srna	Cagliari		RB	80	
	A. Barzagli	Juventus		CB	84	
	Dani Alves	Paris Saint-Germain		RB	82	
		Everton		СВ	77	
	P. Jagielka					
	P. Jaqielka J. Pinola	River Plate		LCB	77	
				LCB RCB	77 85	
	J. Pinola	River Plate				
	J. Pinola Pepe	River Plate Beşiktaş JK		RCB	85	
	J. Pinola Pepe Naldo	River Plate Beşiktaş JK FC Schalke 04		RCB CB	85 85	

		Transf	ferMarke	t Area		
Best Players	Best Goalkeeper	Best Defenders	Best Attacker	Best Midfielder	Value for Money	Hidden Gem
Playe	er Name	Club	Player Position	Overall	Pote	ential
	er Name	Club FC Nantes	Player Position LM	Overall 62		ential 36
A. W. G	Dabo		LM ST	62 64	8 8	36 36
A. W. G P. P	Dabo eubbels tellegri	FC Nantes AS Monaco AS Monaco	LM ST ST	62 64 67	8 8	36 36 38
A. W. G P. P E. A	Dabo eubbels Pellegri mpadu	FC Nantes AS Monaco AS Monaco Chelsea	LM ST ST LDM	62 64 67 65	8 8 8	36 36 38 36
A. W. G P. P E. A C. I	Dabo eubbels rellegri mpadu Früchtl	FC Nantes AS Monaco AS Monaco Chelsea FC Bayern München	LM ST ST LDM GK	62 64 67 65 65		36 36 38 36
A. W. G P. P E. A C. I	Dabo ceubbels tellegri mpadu Früchtl Diop	FC Nantes AS Monaco AS Monaco Chelsea FC Bayern München AS Monaco	LM ST ST LDM GK CAM	62 64 67 65 65 65	8 8 8 8	36 36 38 36 36
A. W. G P. P E. A C. I S.	Dabo eubbels rellegri mpadu Früchtl Diop	FC Nantes AS Monaco AS Monaco Chelsea FC Bayern München AS Monaco Brescia	LM ST ST LDM GK CAM CDM	62 64 67 65 65 66	8 8 8 8 8 8	56 56 58 56 56 57
A. W. G P. P E. A C. I S. S.	Dabo eubbels rellegri mpadu Fruchtl Diop Tonali ui Pulg	FC Nantes AS Monaco AS Monaco Chelsea FC Bayern München AS Monaco Brescia FC Barcelona	LM ST ST LDM GK CAM CDM	62 64 67 65 65 66 68	8 8 8 9 8 8	36 36 38 38 36 36 37 39
A. W. G. P.	Dabo eubbels rellegri mpadu Früchtl Diop	FC Nantes AS Monaco AS Monaco Chelsea FC Bayern München AS Monaco Brescia	LM ST ST LDM GK CAM CDM	62 64 67 65 65 66	8 8 8 8 8 8 9	56 56 58 56 56 57

This is the Transfer market Area. Here we can see the best overall players or the best players for a particular position or the best value for money players or even the hidden gems who are players which are not so good at the moment but might become great in the future. The value for money tab gives us players which are available for a price lesser than they should be. We can see that most of these players are defenders which show that in these days defenders are usually not given the importance they deserve as most teams now are very attack minded.