FOUNDATION OF DATA ANALYTICS[CSE 1006]

PROJECT REPORT

FIFA'19

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METHODOLOGY

1) Collection of data from various verified sources
Scraping

2) Cleaning and manipulation of data according to our needs

3) Carrying out a detailed analysis using R and various other tools

4) Plotting graphs

5) Overall analysis of our data set

6) Final conclusion from our analysis and steps for future improvement

FIFA ANALYSIS 2019

Data:

	Name	Age	Nationality	Overall	Potential	Club	Value	Wage	Preferred Foot	Position	Jersey Number	Joined	Contract Valid Until	Height	Weight	Release Clause
2	L. Messi	31	Argentina	94	94	FC Barcelona	€110.5M	€565K	Left	RF	10	Jul 1, 2004	2021	5'7	159lbs	€226.5M
3	Cristiano Ronaldo	33	Portugal	94	94	Juventus	€77M	€405K	Right	ST	7	Jul 10, 2018	2022	6'2	183lbs	€127.1M
4	Neymar Jr	26	Brazil	92	93	aris Saint-Germai	€118.5M	€290K	Right	LW	10	Aug 3, 2017	2022	5'9	150lbs	€228.1M
5	De Gea	27	Spain	91	93	Manchester United	€72M	€260K	Right	GK	1	Jul 1, 2011	2020	6'4	168lbs	€138.6M
6	K. De Bruyne	27	Belgium	91	92	Manchester City	€102M	€355K	Right	RCM	7	Aug 30, 2015	2023	5'11	154lbs	€196.4M
7	E. Hazard	27	Belgium	91	91	Chelsea	€93M	€340K	Right	LF	10	Jul 1, 2012	2020	5'8	163lbs	€172.1M
8	L. Modrić	32	Croatia	91	91	Real Madrid	€67M	€420K	Right	RCM	10	Aug 1, 2012	2020	5'8	146lbs	€137.4M
9	L. Suárez	31	Uruguay	91	91	FC Barcelona	€80M	€455K	Right	RS	9	Jul 11, 2014	2021	6'0	190lbs	€164M
10	Sergio Ramos	32	Spain	91	91	Real Madrid	€51M	€380K	Right	RCB	15	Aug 1, 2005	2020	6'0	181lbs	€104.6M
11	J. Oblak	25	Slovenia	90	93	Atlético Madrid	€68M	€94K	Right	GK	1	Jul 16, 2014	2021	6'2	192lbs	€144.5M
12	R. Lewandowski	29	Poland	90	90	C Bayern Münche	€77M	€205K	Right	ST	9	Jul 1, 2014	2021	6'0	176lbs	€127.1M
13	T. Kroos	28	Germany	90	90	Real Madrid	€76.5M	€355K	Right	LCM	8	Jul 17, 2014	2022	6'0	168lbs	€156.8M
14	D. Godín	32	Uruguay	90	90	Atlético Madrid	€44M	€125K	Right	CB	10	Aug 4, 2010	2019	6'2	172lbs	€90.2M
15	David Silva	32	Spain	90	90	Manchester City	€60M	€285K	Left	LCM	21	Jul 14, 2010	2020	5'8	148lbs	€111M
16	N. Kanté	27	France	89	90	Chelsea	€63M	€225K	Right	LDM	13	Jul 16, 2016	2023	5'6	159lbs	€121.3M
17	P. Dybala	24	Argentina	89	94	Juventus	€89M	€205K	Left	LF	21	Jul 1, 2015	2022	5'10	165lbs	€153.5M
18	H. Kane	24	England	89	91	Tottenham Hotspu	€83.5M	€205K	Right	ST	9	Jul 1, 2010	2024	6'2	196lbs	€160.7M
19	A. Griezmann	27	France	89	90	Atlético Madrid	€78M	€145K	Left	CAM	7	Jul 28, 2014	2023	5'9	161lbs	€165.8M
20	M. ter Stegen	26	Germany	89	92	FC Barcelona	€58M	€240K	Right	GK	22	Jul 1, 2014	2022	6'2	187lbs	€123.3M
21	T. Courtois	26	Belgium	89	90	Real Madrid	€53.5M	€240K	Left	GK	1	Aug 9, 2018	2024	6'6	212lbs	€113.7M
22	Sergio Busquets	29	Spain	89	89	FC Barcelona	€51.5M	€315K	Right	CDM	5	Sep 1, 2008	2023	6'2	168lbs	€105.6M
23	E. Cavani	31	Uruguay	89	89	aris Saint-Germai	€60M	€200K	Right	LS	21	Jul 16, 2013	2020	6'1	170lbs	€111M
24	M. Neuer	32	Germany	89	89	C Bayern Münche	€38M	€130K	Right	GK	1	Jul 1, 2011	2021	6'4	203lbs	€62.7M
25	S. Agüero	30	Argentina	89	89	Manchester City	€64.5M	€300K	Right	ST	10	Jul 28, 2011	2021	5'8	154lbs	€119.3M
26	G. Chiellini	33	Italy	89	89	Juventus	€27M	€215K	Left	LCB	3	Jul 1, 2005	2020	6'2	187lbs	€44.6M
27	K. Mbappé	19	France	88	95	aris Saint-Germai	€81M	€100K	Right	RM	10	Jul 1, 2018	2022	5'10	161lbs	€166.1M
28	M. Salah	26	Egypt	88	89	Liverpool	€69.5M	€255K	Left	RM	10	Jul 1, 2017	2023	5'9	157lbs	€137.3M
29	Casemiro	26	Brazil	88	90	Real Madrid	€59.5M	€285K	Right	CDM	14	Jul 11, 2013	2021	6'1	185lbs	€126.4M

Name(column-1) :
Full names of all the football players are given in this column.

Age(column-2):
This column gives us the age of the player. The total number years completed by a player in his lifetime so far.

Nationality(column-3):
Country to which a player belongs or the one in which he plays during World Cup matches is the nationality of a

player. There can be a difference between the birth place and nationality as many countries offer players of other nations to play of their nation at an early age.

Overall(column-4):

It's average of all attributes and abilities a player has. This attributes and abilities are decided based on player statistics so far and also the game experts. Overall is a score out of 100. Player above overall of 80 is considered as a top quality player.

Potential(column-5):

It is also a score out of 100 awarded to player based on his natural abilities. This score is decided by football experts and critics.

Club(Column-6):

There are 4 major leagues in the world namely Premier League, La Liga, Bundesliga and Serie A. There are many other small leagues. These Leagues have many teams called clubs. This column gives the club to which player belongs.

Value(Column-7):

This is the lifetime value of the player in the market. This amount is in euros.

Wage(Column-8):

The monthly money paid by the club to the player is called wage. This amount is in euros.

Preferred Foot(Column-9):

As some people are righty or lefty by hand we also have a preferred foot that is more dominant and active than the other. This column basically tells whether player is righty or lefty by leg.

Position(Column-10):

Every football team has a formation or a pattern in which players are distributed on the field. This formation is based on whether a player is a Striker, Midfielder or a defender. Position is the place where player is placed in the formation.

Jersey number(Column-11):

Jersey number has an important role in football. As it is not possible for us to recognize a player while playing because face is not visible all the time. Players are

recognized based on their jersey number. 10 and 7 are most loved jerseys of all time.

Joined(Column-12):
It is the date on which the player joined the current club.

Contract Valid Until(Column-13):
It the year up to which the player will serve the club. Before that years neither the player can leave the club nor the club can remove the player.

Height(Column-14):
Height of the player in feet.

Weight(Column-15):
Weight of the player in pounds.

Release Clause(Column-16):
If the player is transferred to some other club after end of contract then release clause is the minimum amount to be paid by the club interested to buy that player. If multiple clubs are interested that bidding is done.

Questions:

1. What is the highest potential in the whole data?

```
> data <- read.csv("Fifa.csv")
> max(data$Potential)
[1] 95
```

Answer: 95

2. What is the age of the oldest player?

```
> max(data$Age)
[1] 40
```

Answer: 40

3. What is the potential of H Kane?

```
> a<-grep("H. Kane", data$Name)
> data[a,5]
[1] 91
```

Answer: 91

4. What is the Height of E. Hazard?

```
> a<-grep("E. Hazard",data$Name)
> data[a,14]
[1] 5'8
Levels: 5'10 5'11 5'4 5'5 5'6 5'7 5'8 5'9 6'0 6'1 6'2 6'3 6'4 6'5 6'6
```

Answer: 5'8

5. What is the weight of David Silva?

```
> a<-grep("David Silva",data$Name)
> data[a,15]
[1] 148lbs
32 Levels: 130lbs 132lbs 134lbs 141lbs 146lbs 148lbs 150lbs 152lbs 154lbs 157lbs 159lbs 161lbs 163lbs 165lbs 168lbs 170lbs 172lbs 174lbs 176lbs 179lbs ... 212lbs
```

Answer: 148 lbs

6. What is the name of the player with height age?

```
> max(data$Age)
[1] 40
> a<-grep(40,data$Age)
> a
[1] 42
> data[a,1]
[1] G. Buffon
100 Levels: A. Griezmann A. Lacazette A. SÃ¡nchez A. Vidal Alex Sandro Alisson .
```

Answer: G. Buffon

7. What is the average age of the players playing football?

```
> mean(data$Age)
[1] 27.95
~ |
```

Answer: 27.95

8. When did Neymar Jr joined his club?

```
> a<-grep("Neymar Jr",data$Name)
> data[a,12]
[1] 3-Aug-17
70 Levels:  1-Aug-05 1-Aug-12 1-Jan-07 1-Jan-11 1-Jan-18 1-Jul-04
```

Answer: 3-Aug-2017

9.What is the field position of A. Griezmann?

```
> a<-grep("A. Griezmann",data$Name)
> data[a,10]
[1] CAM
Levels: CAM CB CDM CM GK LAM LB LCB LCM LDM LF LM LS
~ |
```

Answer: CAM

10. What is preferred foot of Alisson?

```
> a<-grep("Alisson",data$Name)
> data[a,9]
[1] Right
Levels: Left Right
~ |
```

Answer: Right

11. Till when is contract valid forJ. Oblak?

```
> a<-grep("J. Oblak",data$Name)
> data[a,13]
[1] 2021
Levels: 2019 2020 2021 2022 2023 2024 2025 2026 30-Jun-19
```

Answer: 2021

12. To which Club Cristiano Ronaldo belong?

```
> a<-grep("Cristiano Ronaldo",data$Name)
> data[a,6]
[1] Juventus
23 Levels: Arsenal AtlÃ©tico Madrid Borussia Dortmund
```

Answer: Juventus

13. Who is the player on 100th position?

```
> data[100,1]
[1] S. Khedira
```

Answer: S. Khedira

14. What is the Age of Leonial Messi?

```
> a<-grep("L. Messi",data$Name)
> data[a,2]
[1] 31
```

Answer: 31

15. According to data, who is the best football player?
Answer: Both L. Messi and C Ronaldo are the best
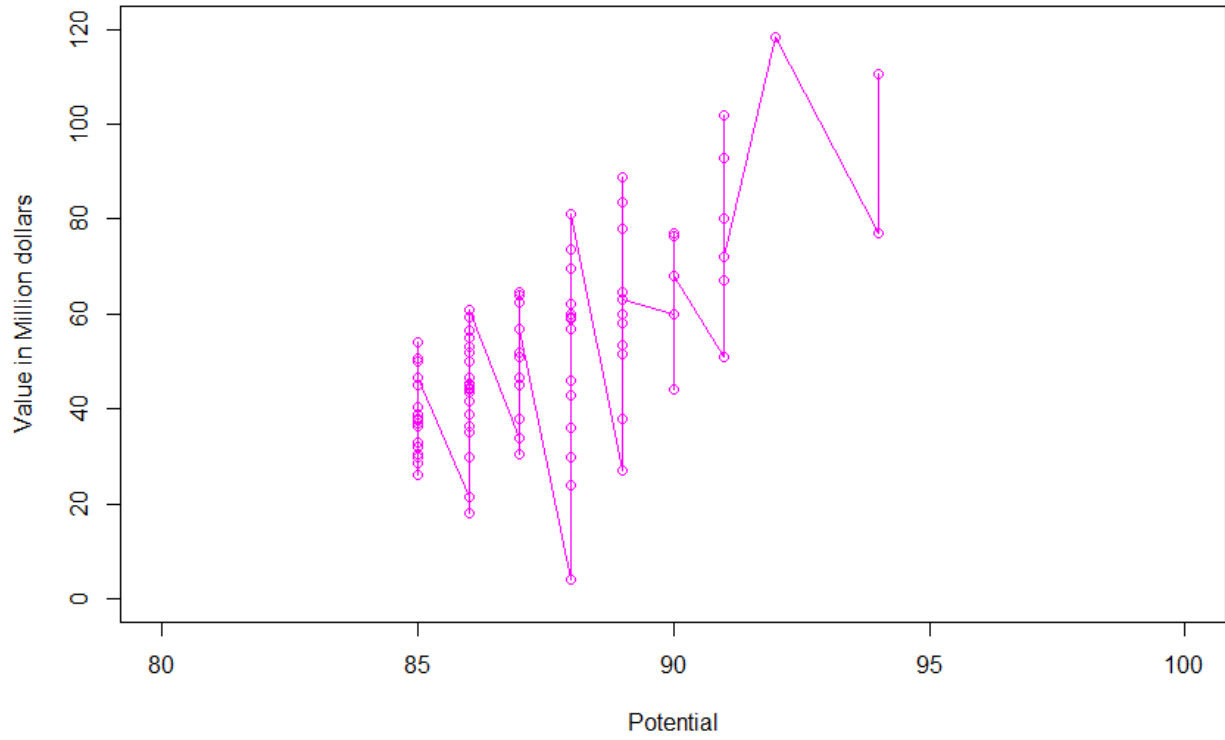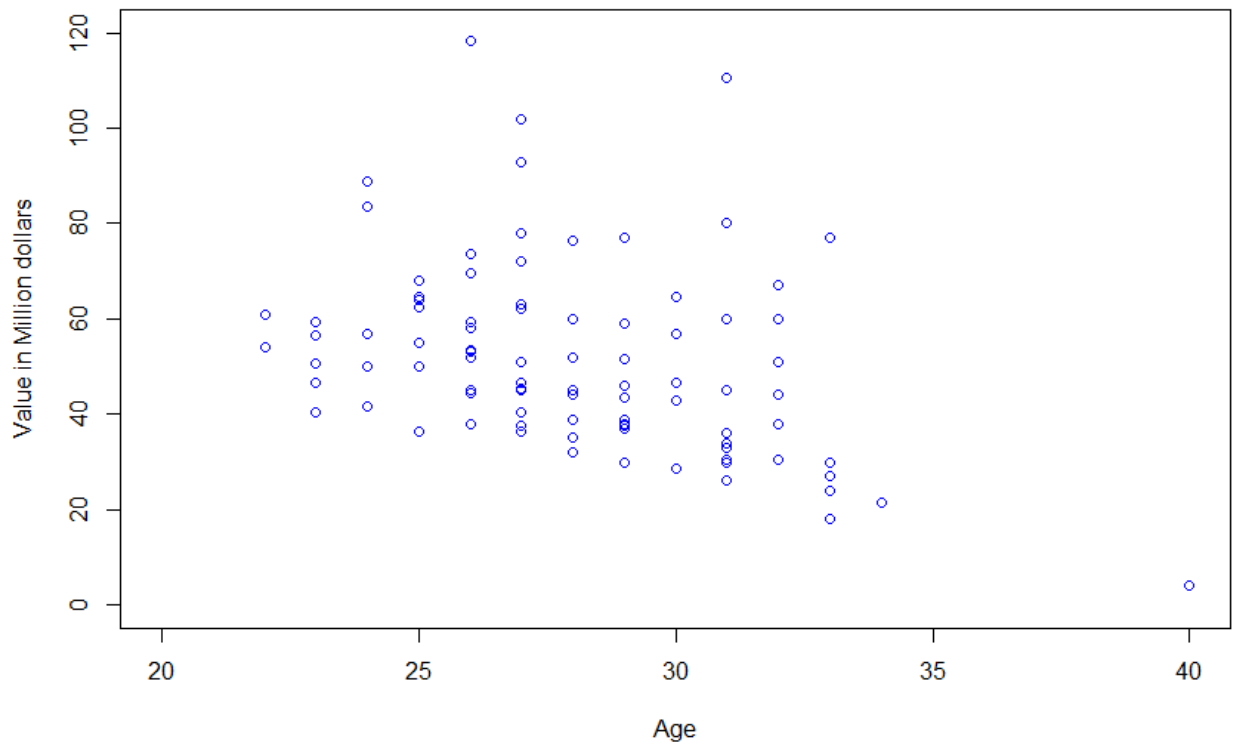because they have the same Potential And Overall.
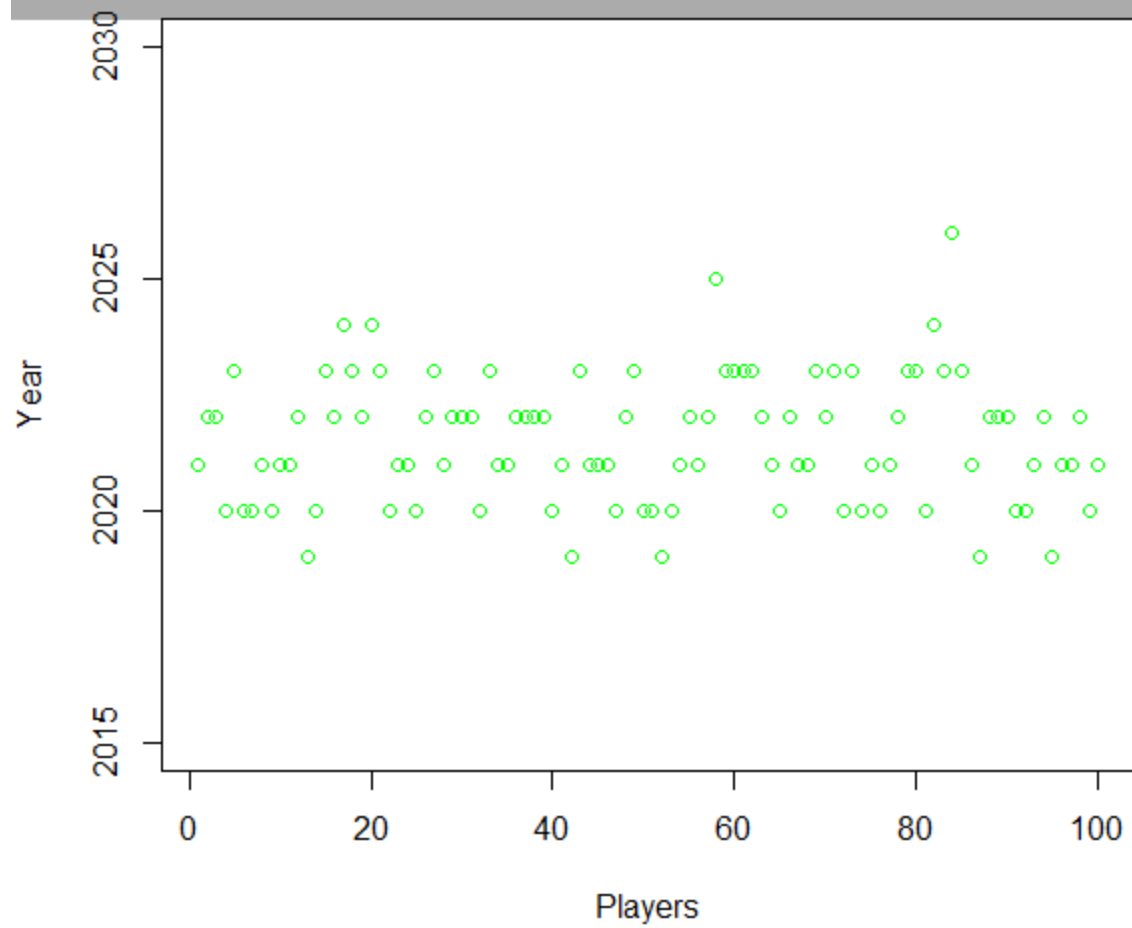
Analysis:

Overall v/s player

Potential v/s player
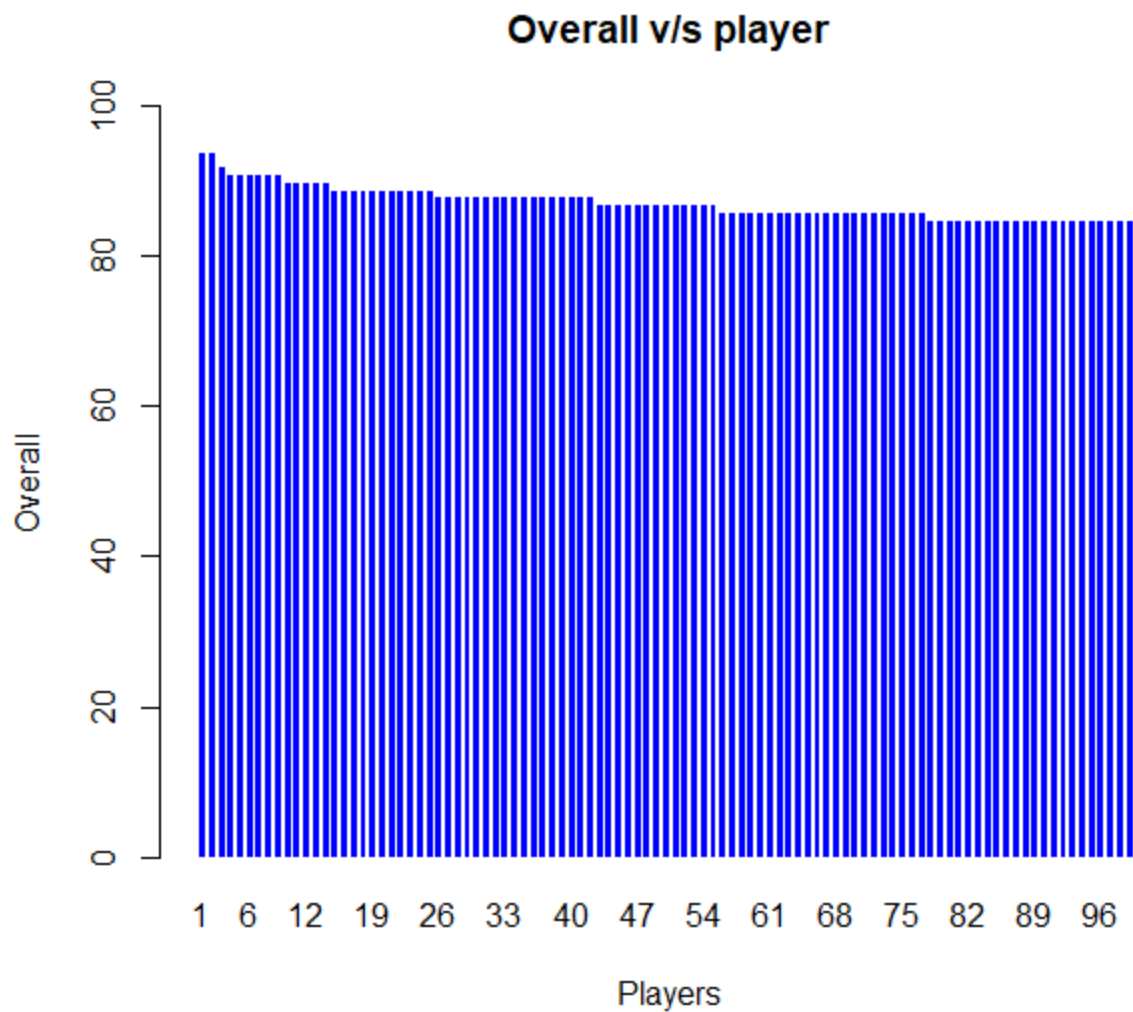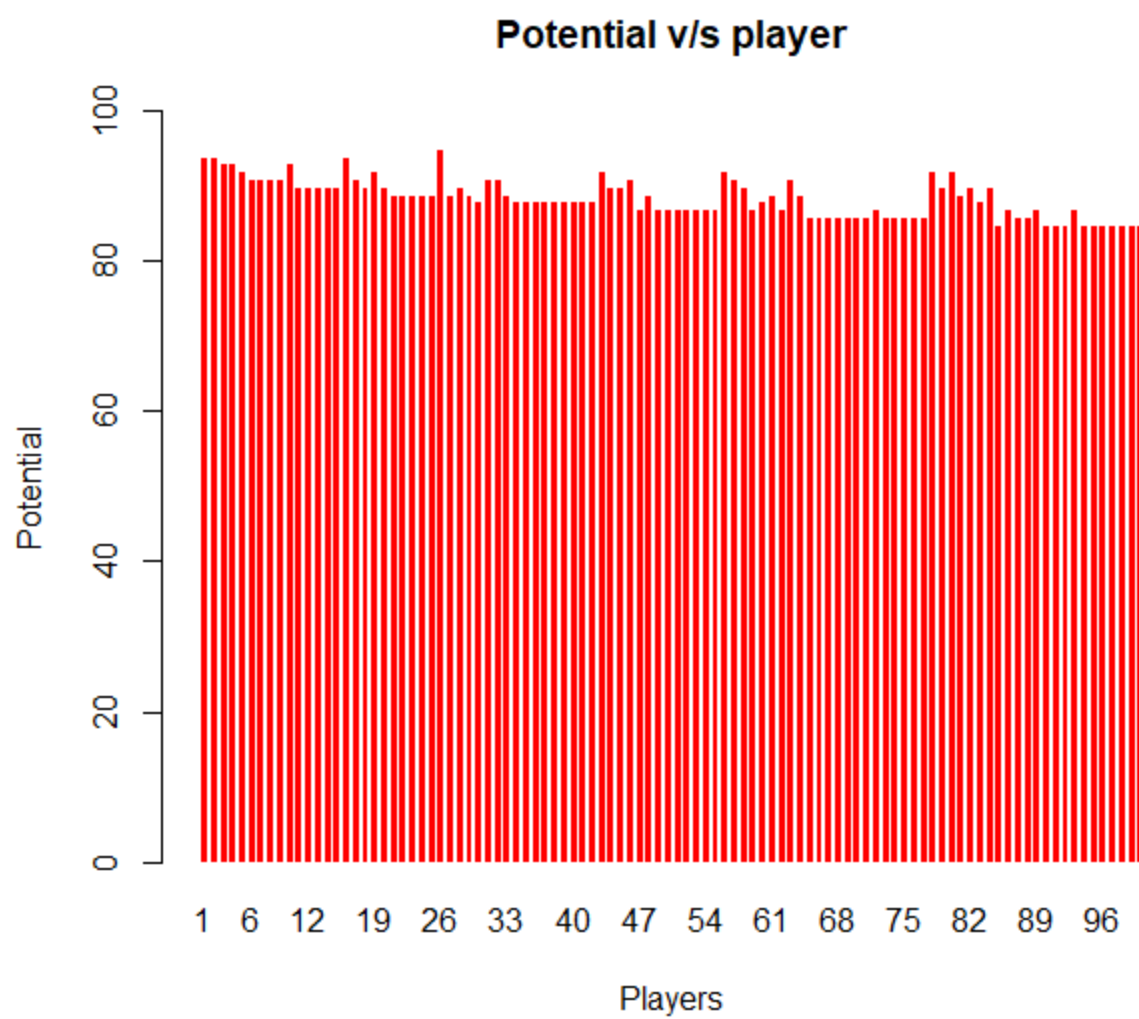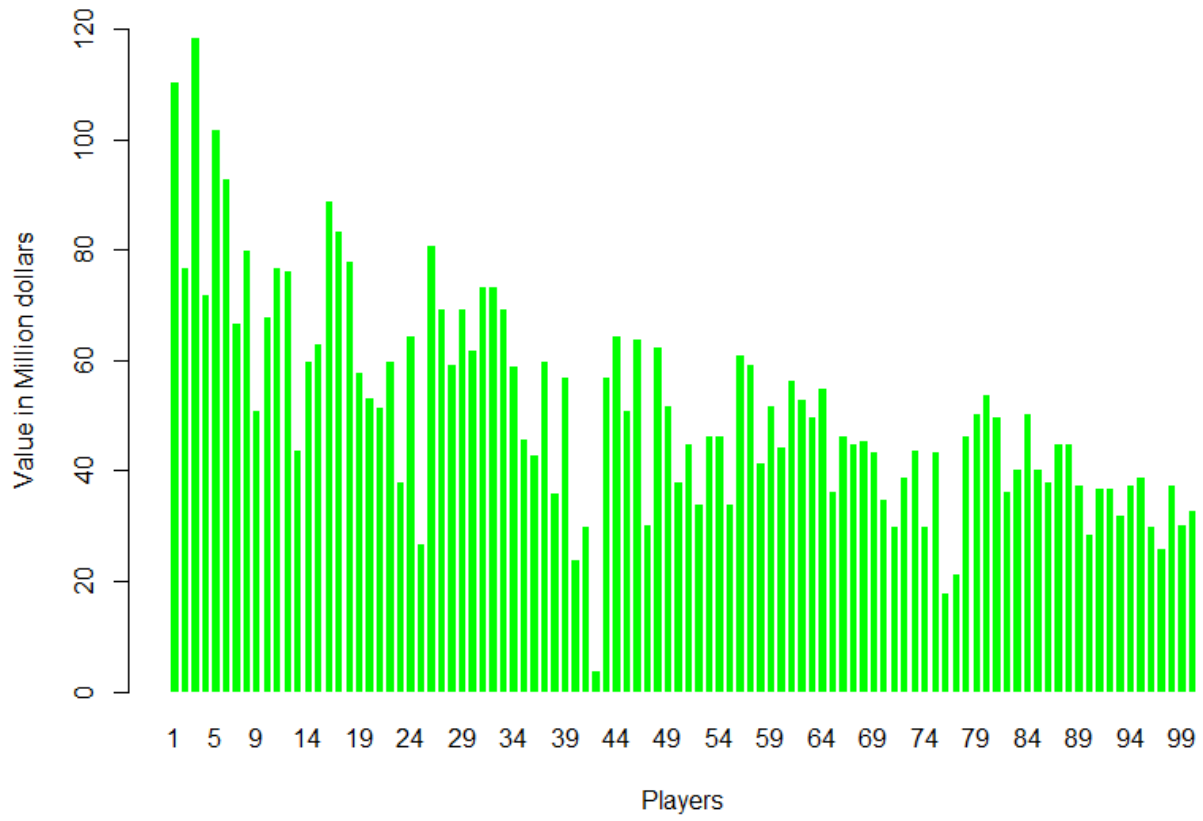
Value(M$) v/s player

Value(M$) v/s Overall

Value(M$) v/s Age

Contract date v/s Payer

Jersey_number v/s Payer

Jersey_number
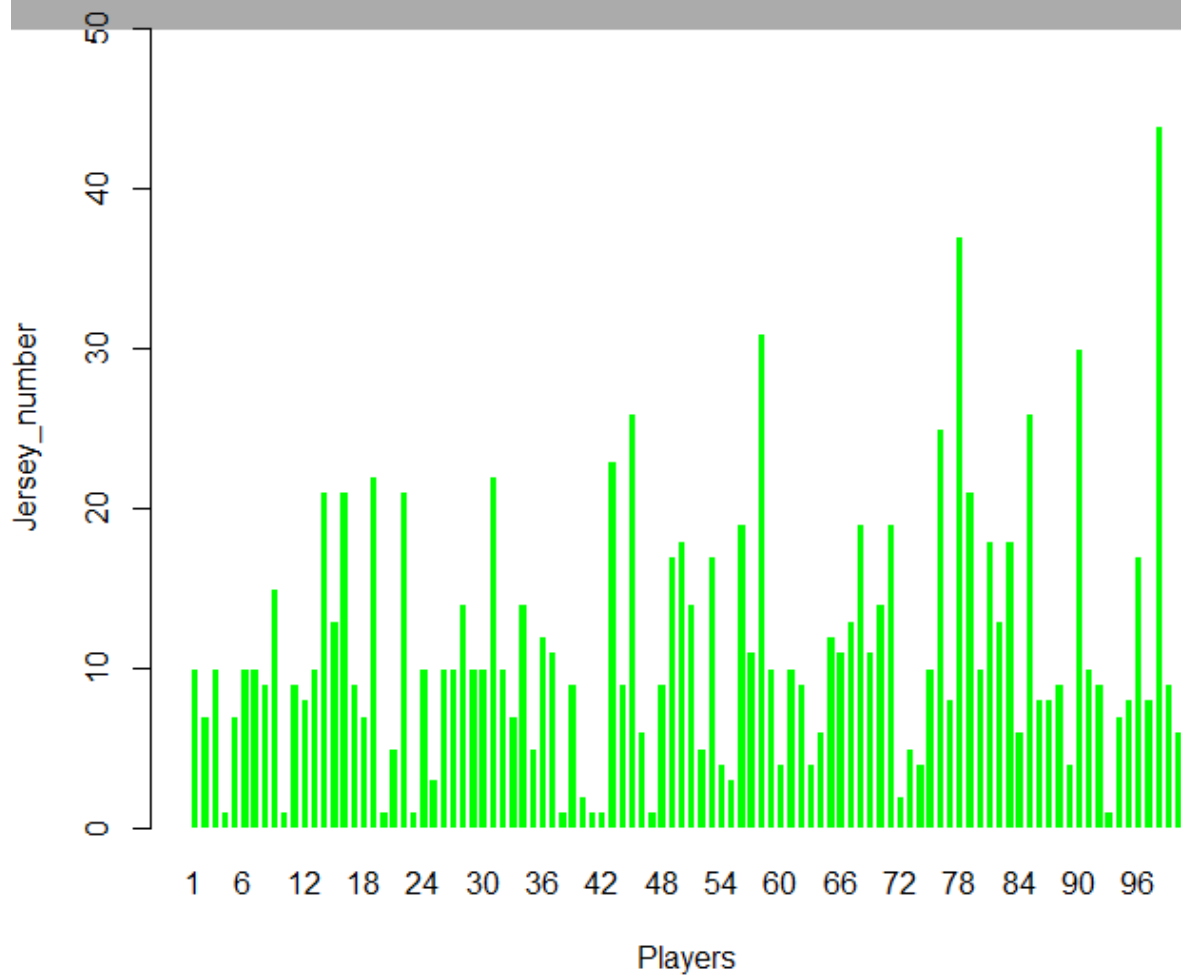
Players

Conclusion:

This report is basically dataset of fifa'19 .
This report was made by studying 100 players.

- Name
- Age
- Nationality
- Overall
- Potential
- Club
- Value_MD
- Wages
- Prefered Foot
- Position
- Jersey_Number
- Joined
- Contract_Valid_Until
- Height
- Weight
- Release_Clause_MD

This was a collective study of the above mentioned topics for the countries mentioned at top. The data for all countries is not available as for various countries as the data is kept confidential.

This research has been done using **R 3.6.1** software.

References:

www.kaggle.com