PRINTING THE ENTIRE DATASET

	Unnamed: 0	ID	Name	Age	Photo	Nationality	Flag	Overall	Potential	Club	...
0	0	158023	L. Messi	31	https://cdn.sofifa.org/players/4/19/158023.png	Argentina	https://cdn.sofifa.org/flags/52.png	94	94	FC Barcelona	...
1	1	20801	Cristiano Ronaldo	33	https://cdn.sofifa.org/players/4/19/20801.png	Portugal	https://cdn.sofifa.org/flags/38.png	94	94	Juventus	...
2	2	190871	Neymar Jr	26	https://cdn.sofifa.org/players/4/19/190871.png	Brazil	https://cdn.sofifa.org/flags/54.png	92	93	Paris Saint-Germain	...
3	3	193080	De Gea	27	https://cdn.sofifa.org/players/4/19/193080.png	Spain	https://cdn.sofifa.org/flags/45.png	91	93	Manchester United	...
4	4	192985	K. De Bruyne	27	https://cdn.sofifa.org/players/4/19/192985.png	Belgium	https://cdn.sofifa.org/flags/7.png	91	92	Manchester City	...
...	...	...	...	...	...	...	...	...	...	...	...
18202	18202	238813	J. Lundstram	19	https://cdn.sofifa.org/players/4/19/238813.png	England	https://cdn.sofifa.org/flags/14.png	47	65	Crewe Alexandra	...

Composure	Marking	StandingTackle	SlidingTackle	GKDiving	GKHandling	GKKicking	GKPositioning	GKReflexes	Release Clause
96.0	33.0	28.0	26.0	6.0	11.0	15.0	14.0	8.0	€226.5M
95.0	28.0	31.0	23.0	7.0	11.0	15.0	14.0	11.0	€127.1M
94.0	27.0	24.0	33.0	9.0	9.0	15.0	15.0	11.0	€228.1M
68.0	15.0	21.0	13.0	90.0	85.0	87.0	88.0	94.0	€138.6M
88.0	68.0	58.0	51.0	15.0	13.0	5.0	10.0	13.0	€196.4M
...	...	...	...	...	...	...	...	...	...
45.0	40.0	48.0	47.0	10.0	13.0	7.0	8.0	9.0	€143K

Cleaning Data

Checking Missing Values Heat Map for first half of the data

Checking Missing Values Heat Map for second half of the data
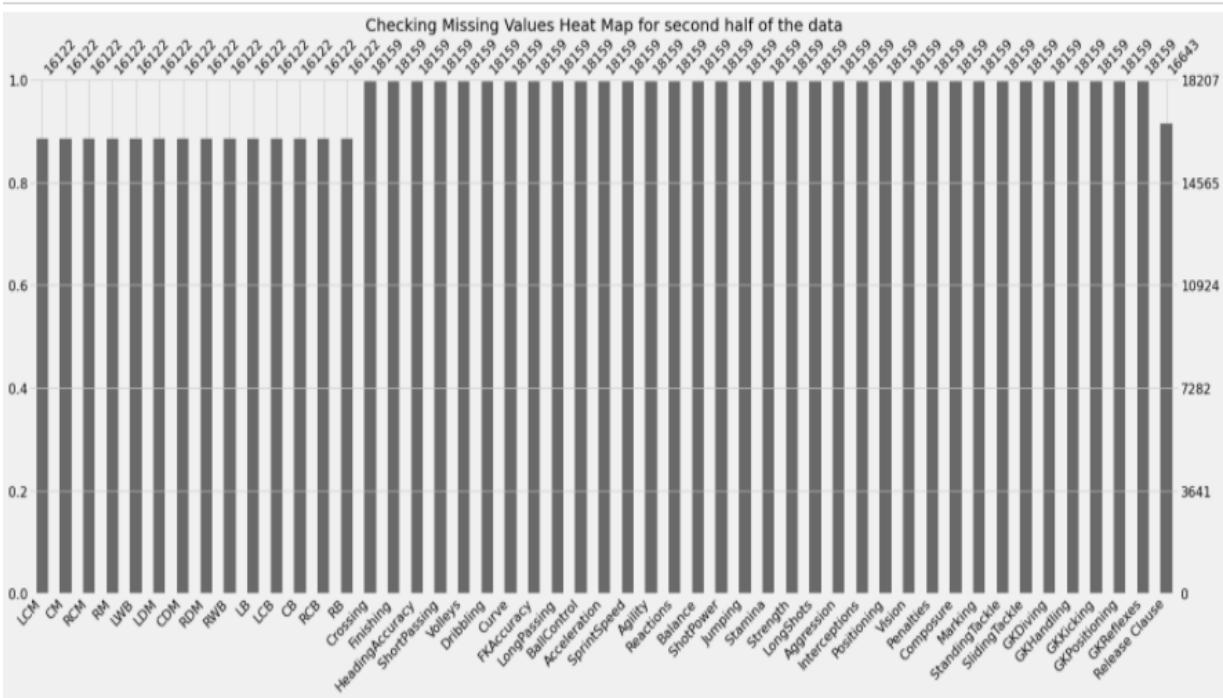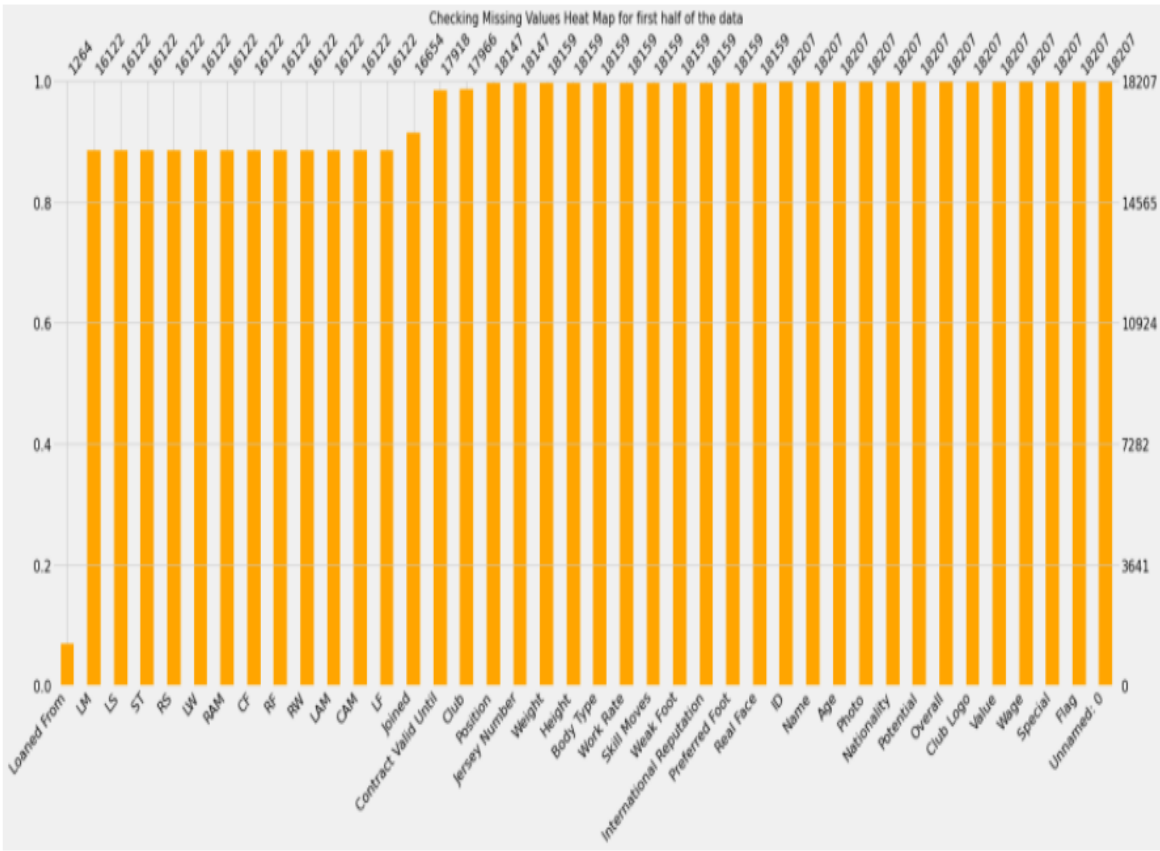
Missing Values Imputation

Unnamed: 0	0	LS	2085	LongPassing	0
ID	0	ST	2085	BallControl	0
Name	0	RS	2085	Acceleration	48
Age	0	LW	2085	SprintSpeed	48
Photo	0	LF	2085	Agility	48
Nationality	0	CF	2085	Reactions	48
Flag	0	RF	2085	Balance	48
Overall	0	RW	2085	ShotPower	48
Potential	0	LAM	2085	Jumping	48
Club	0	CAM	2085	Stamina	48
Club Logo	0	RAM	2085	Strength	48
Value	0	LM	2085	LongShots	48
Wage	0	LCM	2085	Aggression	48
Special	0	CM	2085	Interceptions	48
Preferred Foot	0	RCM	2085	Positioning	48
International Reputation	0	RM	2085	Vision	48
Weak Foot	0	LWB	2085	Penalties	48
Skill Moves	0	LDM	2085	Composure	48
Work Rate	0	CDM	2085	Marking	48
Body Type	0	RDM	2085	StandingTackle	48
Real Face	48	RWB	2085	SlidingTackle	48
Position	0	LB	2085	GKDiving	48
Jersey Number	0	LCB	2085	GKHandling	48
Joined	0	CB	2085	GKKicking	48
Loaned From	0	RCB	2085	GKPositioning	48
Contract Valid Until	0	RB	2085	GKReflexes	48
Height	0	Crossing	0	Release Clause	1564
Weight	0				

Data Visualization
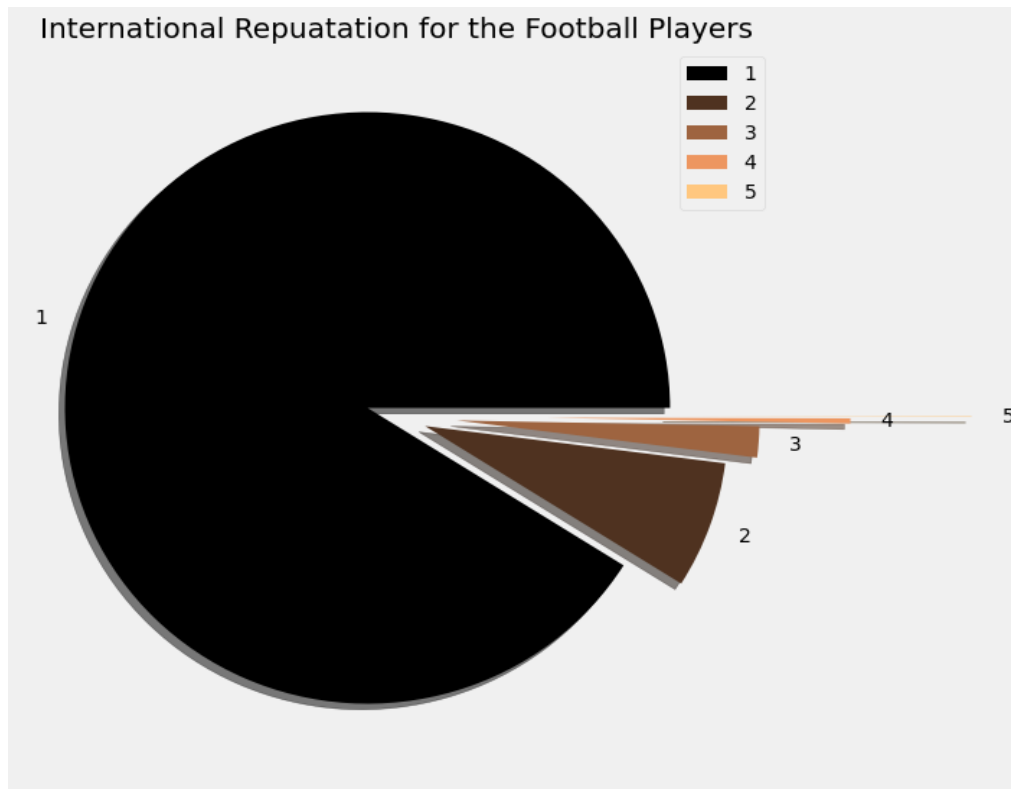
The Distribution of Scores of Different Skills

Score Distributions for Different Abilities
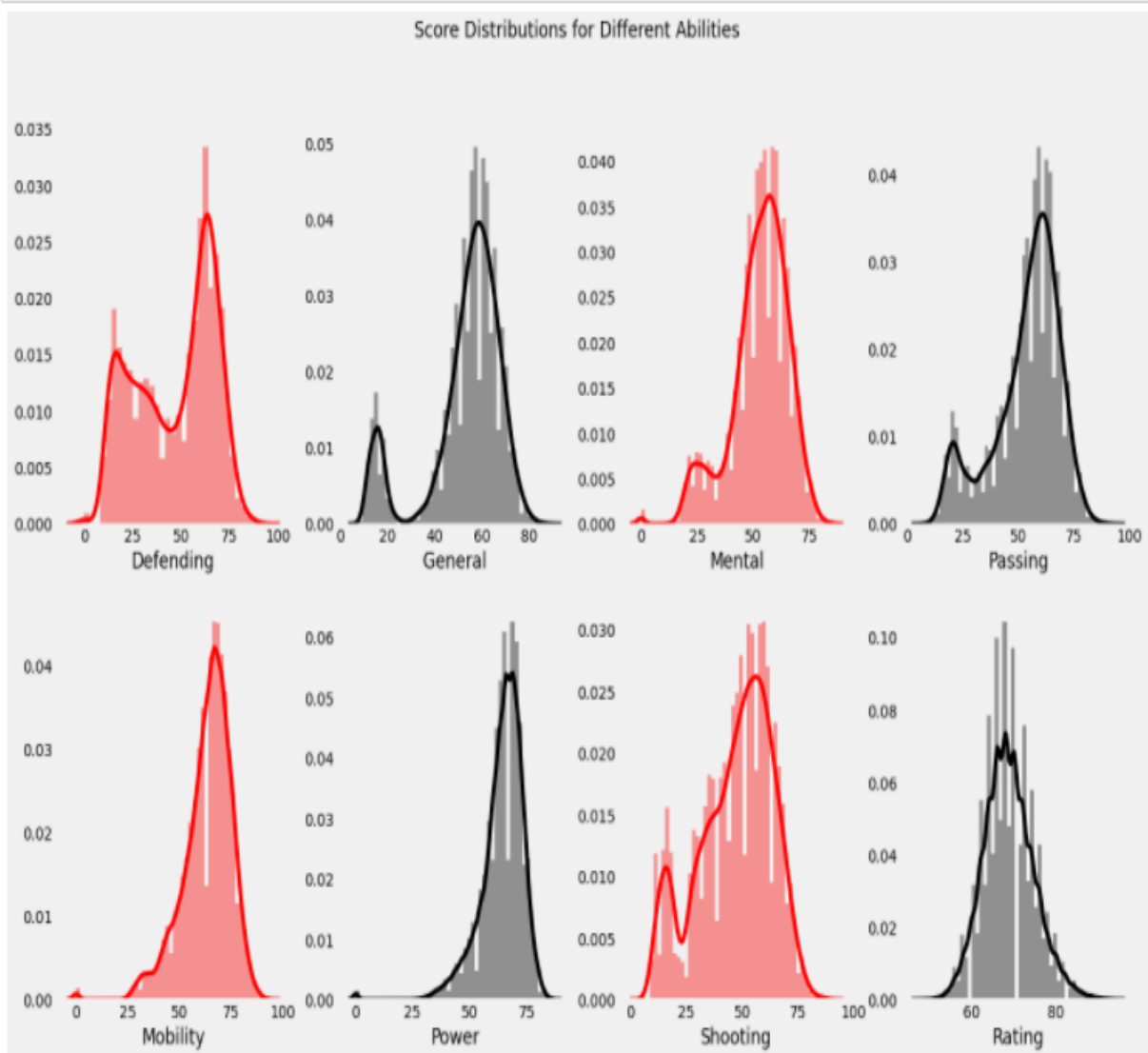
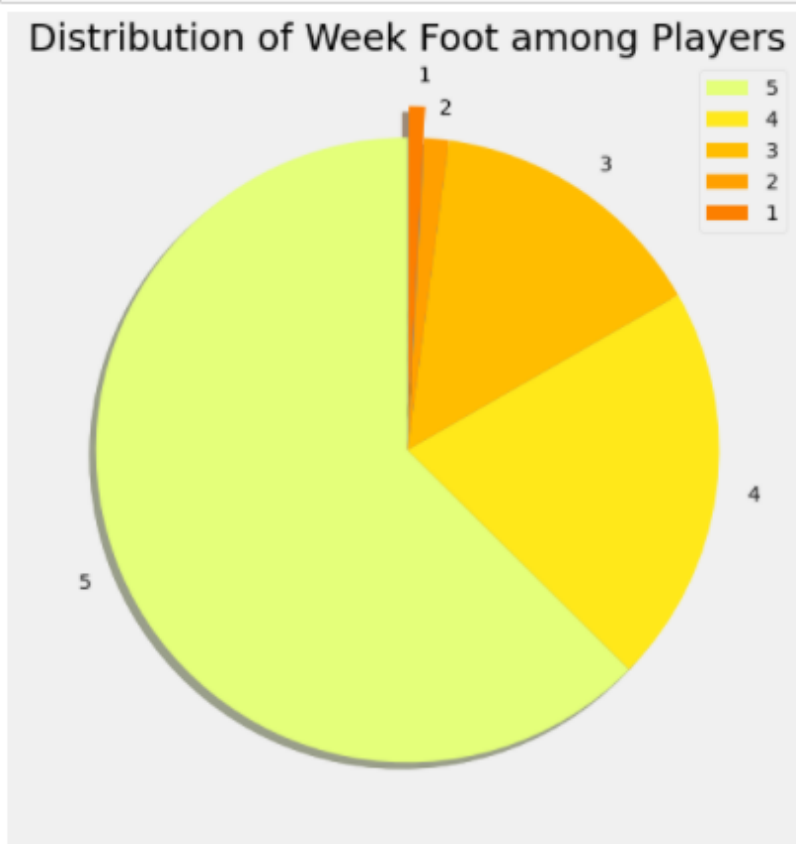# Comparison of preferred foot over the different players
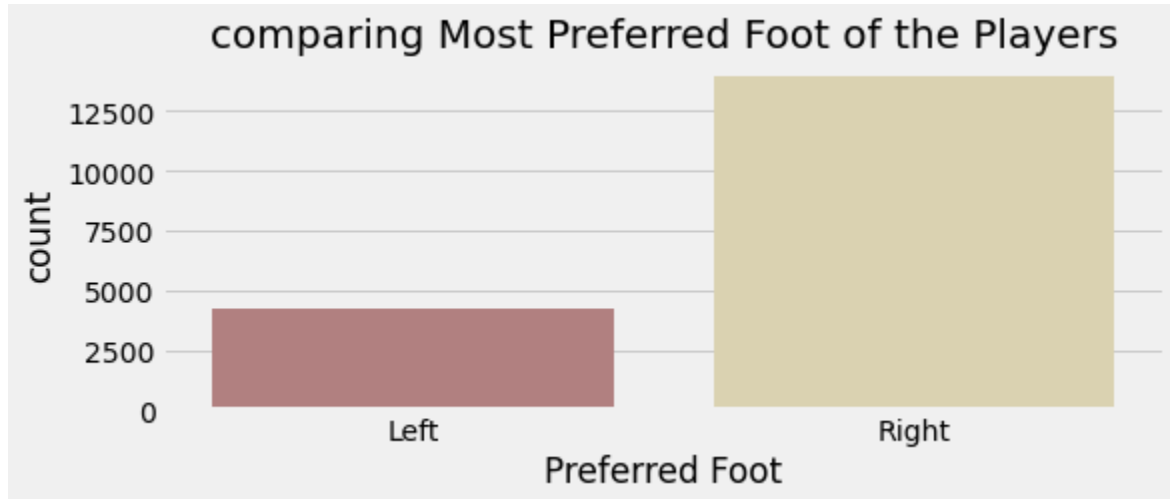
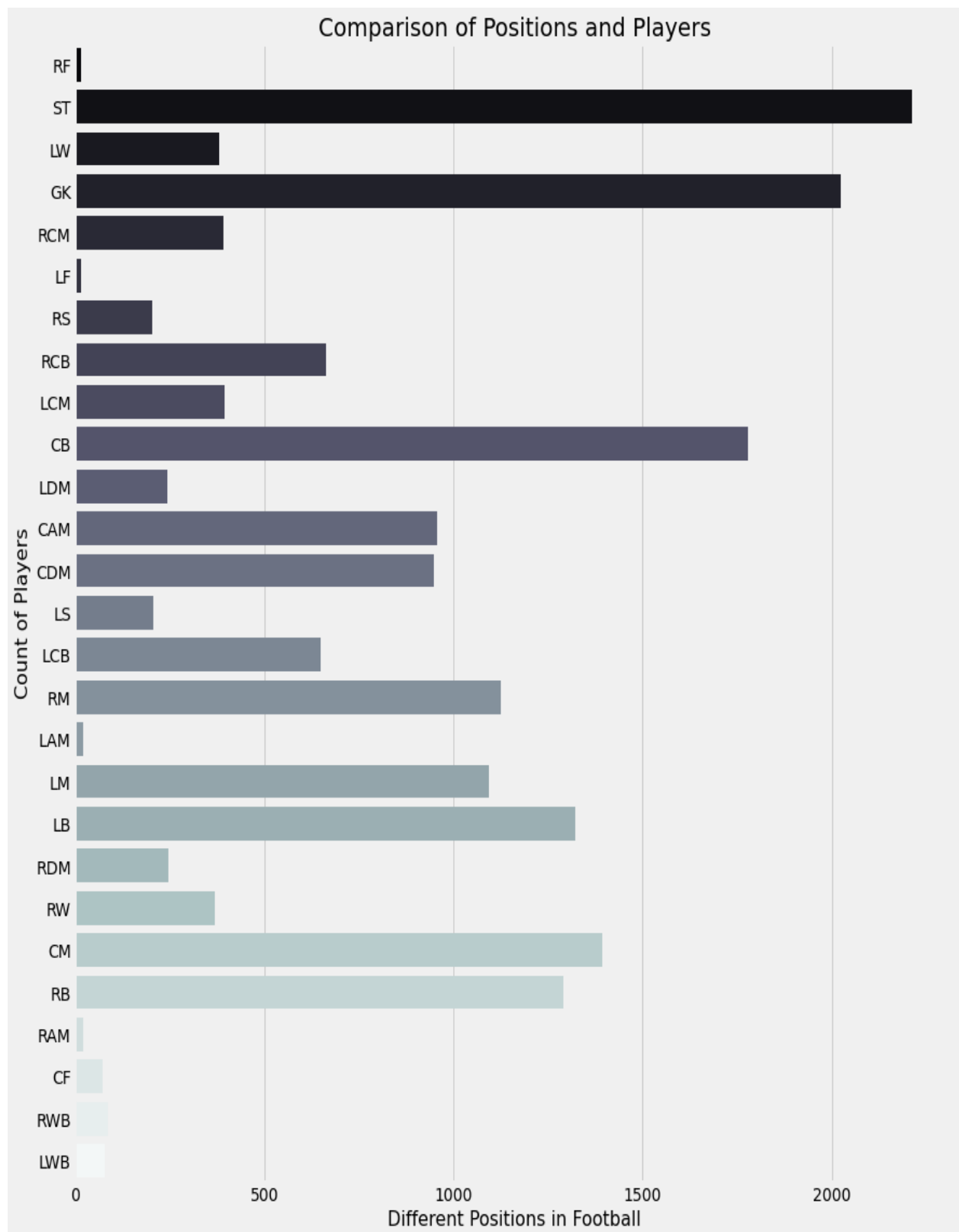
Pie chart to represent share of international reputation

Let's check the Players with International Reputation as 5

	Name	Nationality	Overall
0	L. Messi	Argentina	94
1	Cristiano Ronaldo	Portugal	94
2	Neymar Jr	Brazil	92
7	L. Suárez	Uruguay	91
22	M. Neuer	Germany	89
109	Z. Ibrahimović	Sweden	85

Pie chart to represent the share of week foot players

Distribution of Week Foot among Players

Different positions acquired by the players

Comparison of Positions and Players

Count of Players (y-axis): RF, ST, LW, GK, RCM, LF, RS, RCB, LCM, CB, LDM, CAM, CDM, LS, LCB, RM, LAM, LM, LB, RDM, RW, CM, RB, RAM, CF, RWB, LWB

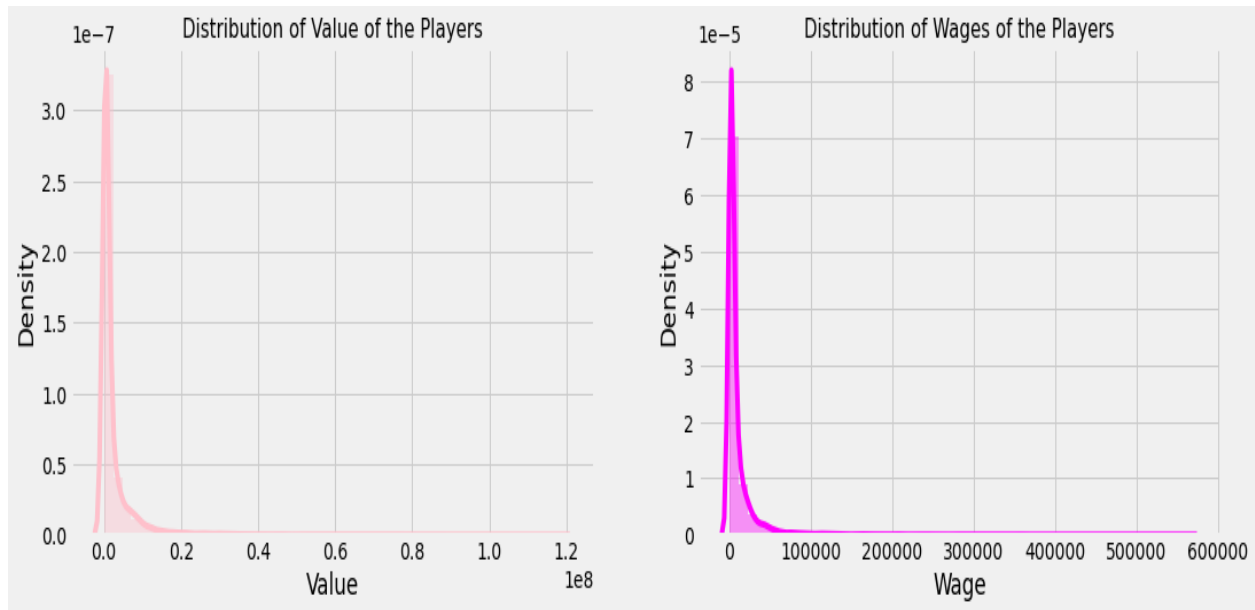Different Positions in Football (x-axis): 0, 500, 1000, 1500, 2000
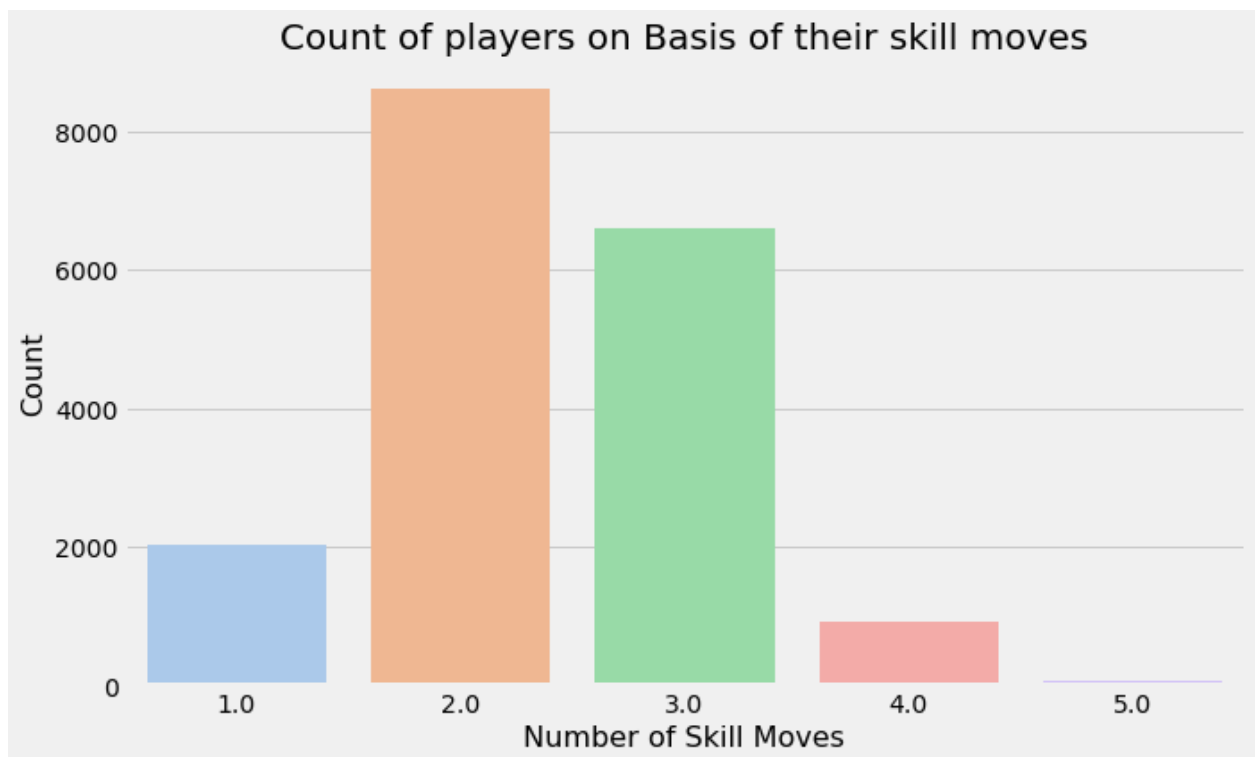
Cleaning the Weight data

Distribution of weight of the players
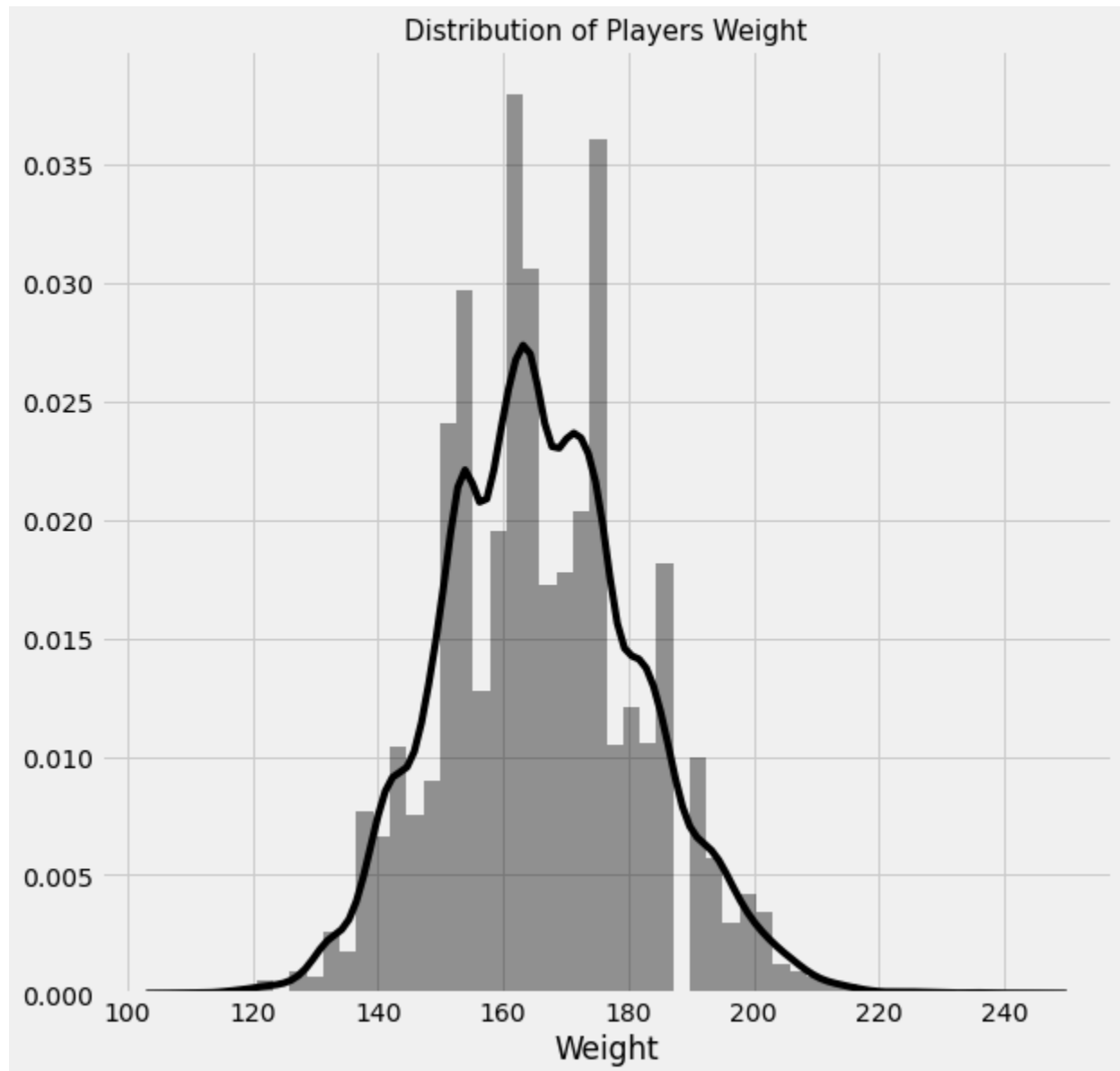
Applying the function to the wage and value column

Skill Moves of Players
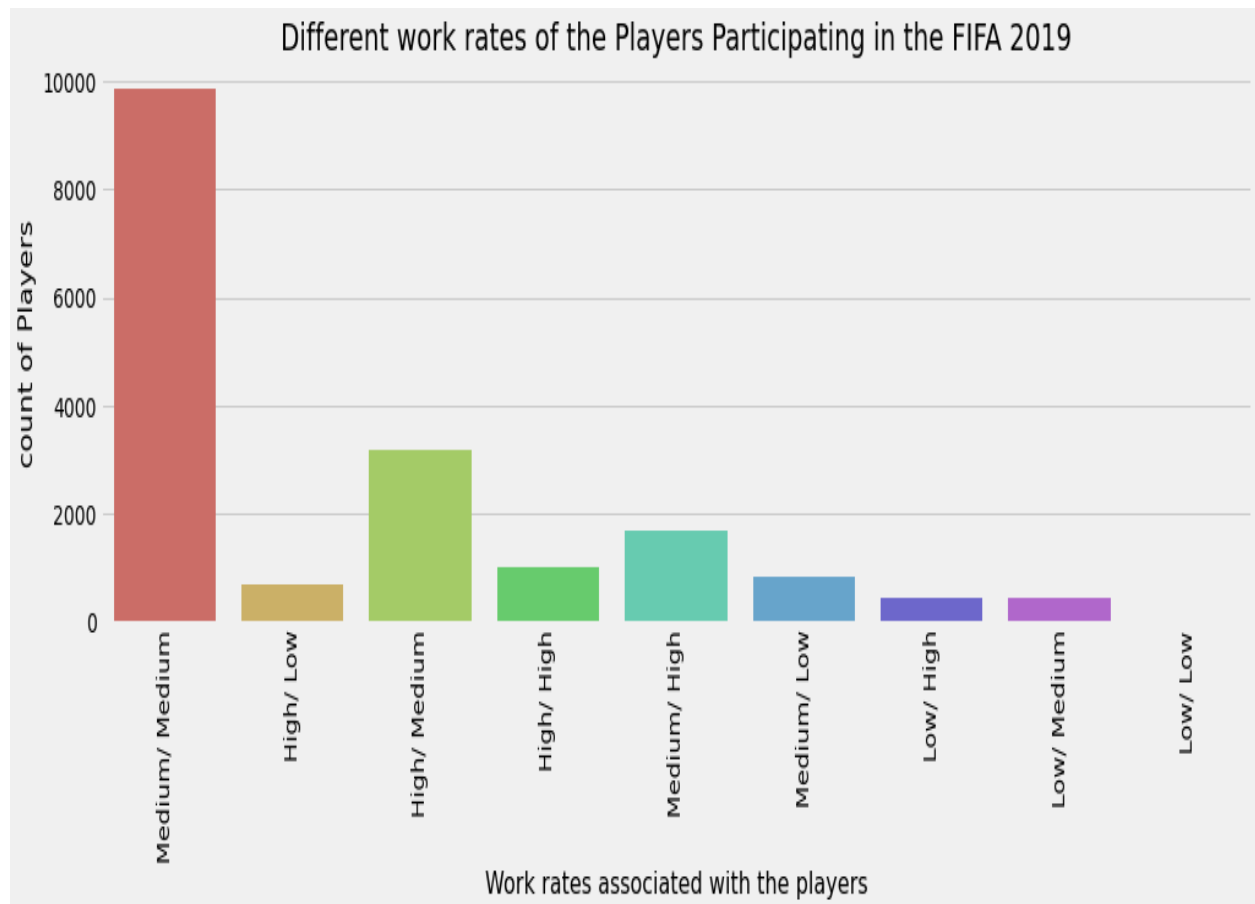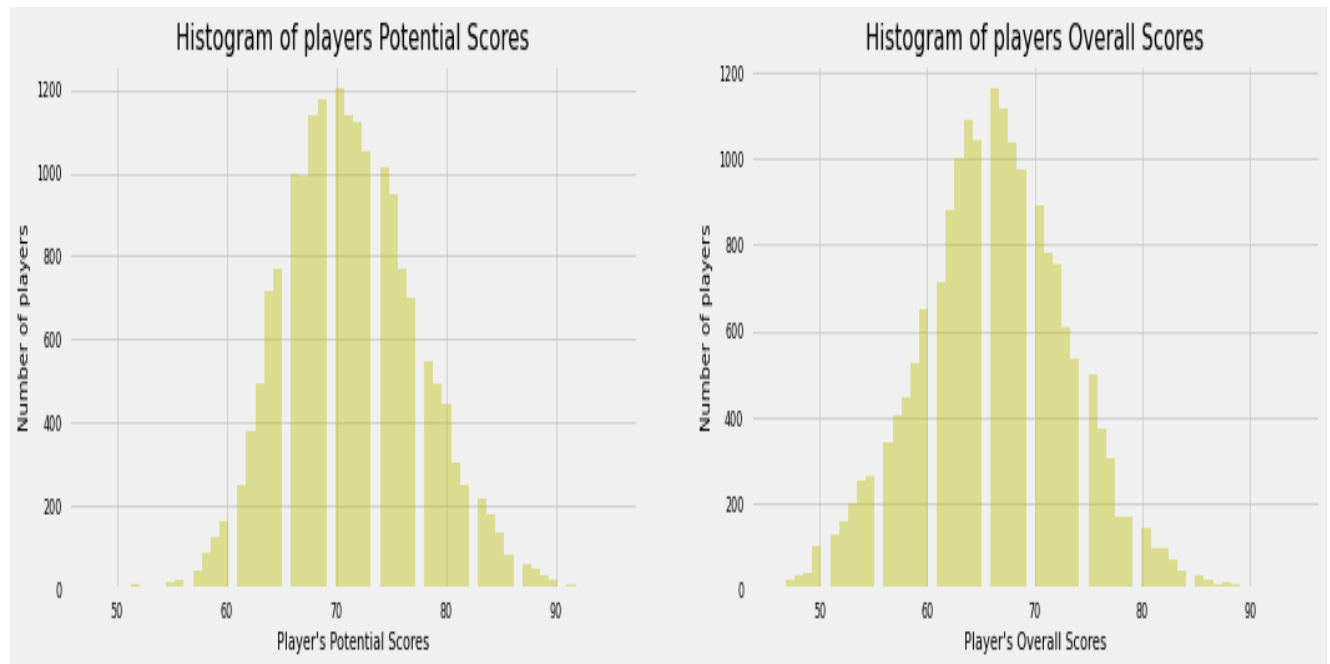
Data Regarding Skill Moves

	Name	Age
25	K. Mbappé	19
1004	J. Sancho	18
1143	Vinícius Júnior	17
2495	M. Ødegaard	19

Different Work rate of the players participating in the FIFA 2019
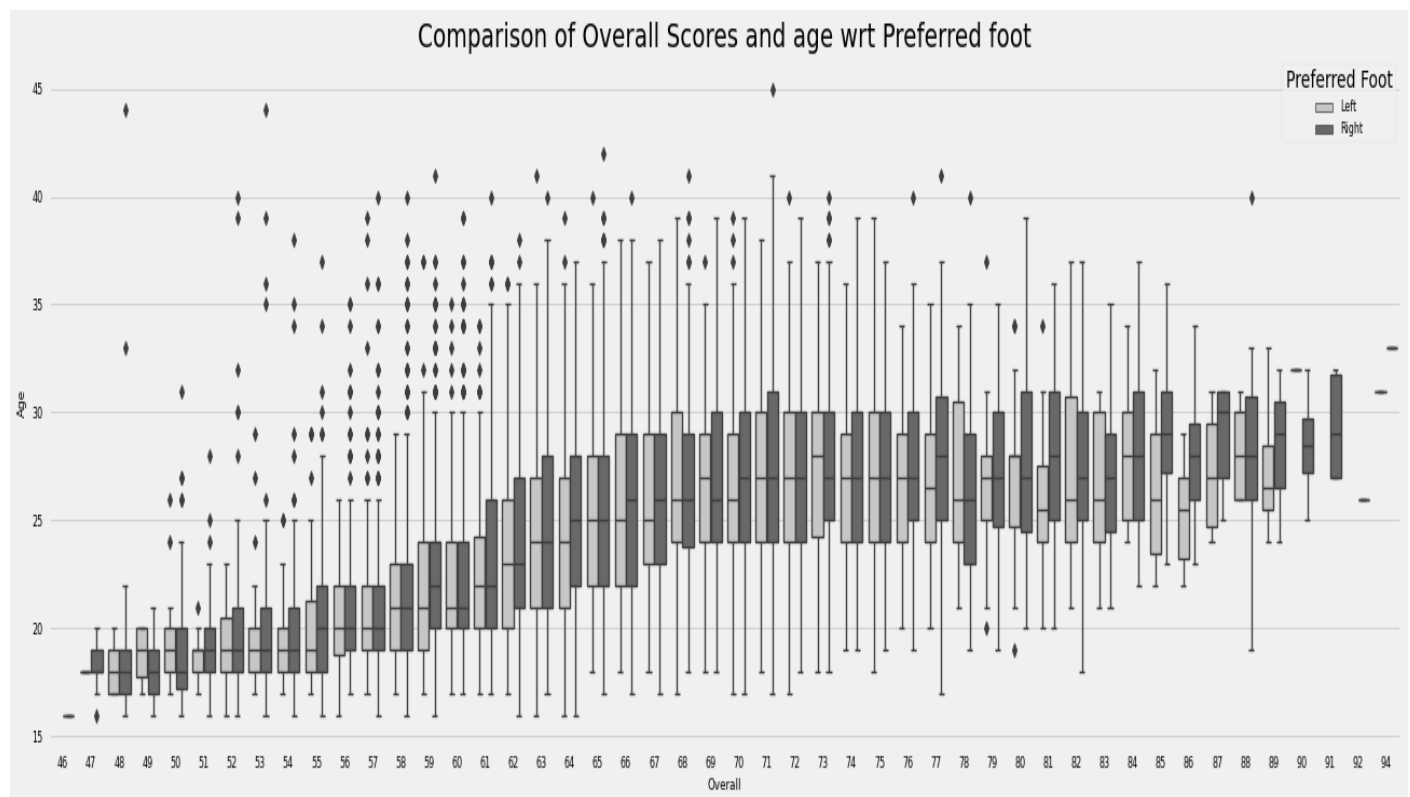

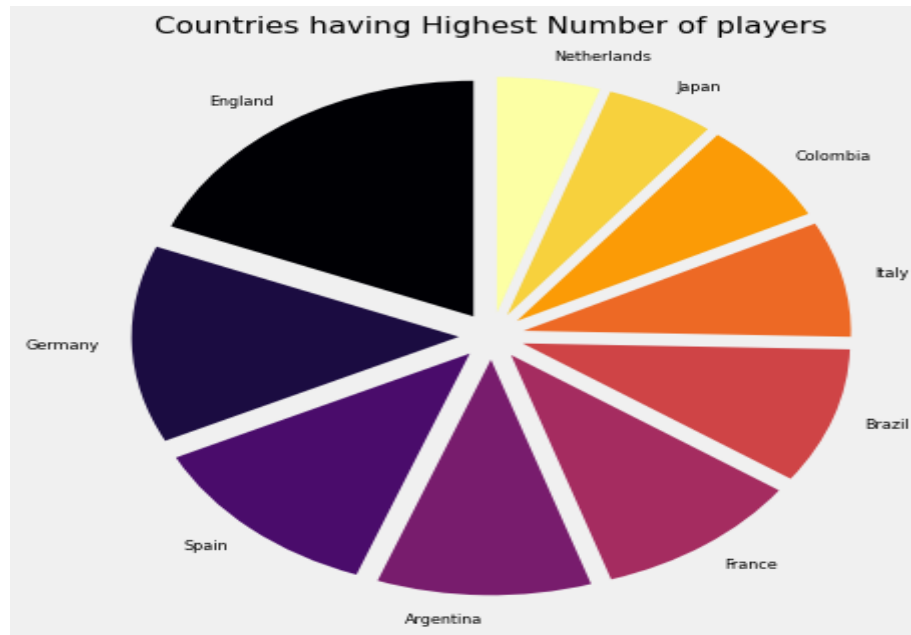Different work rates of the Players Participating in the FIFA 2019

Different Work rate of the players participating in the FIFA 2019

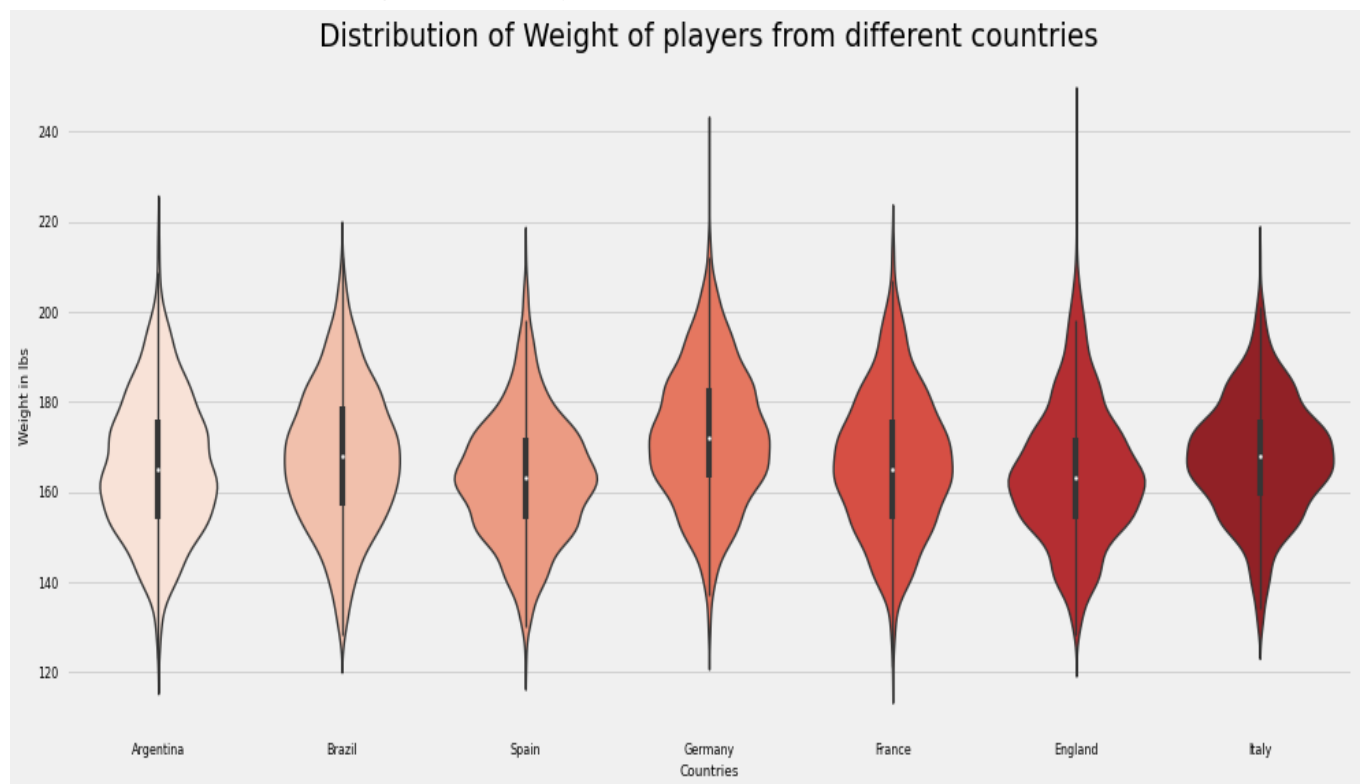# Comparison of Overall Scores and age wrt Preferred foot

Countries with Most Players

Distribution of Weight of players from different countries

Distribution of overall scores of players from different countries

Distribution of overall scores of players from different countries

Distribution of Wages of players from different countries

Distribution of Wages of players from different countries

Distribution of International Repuatation of players from different countries
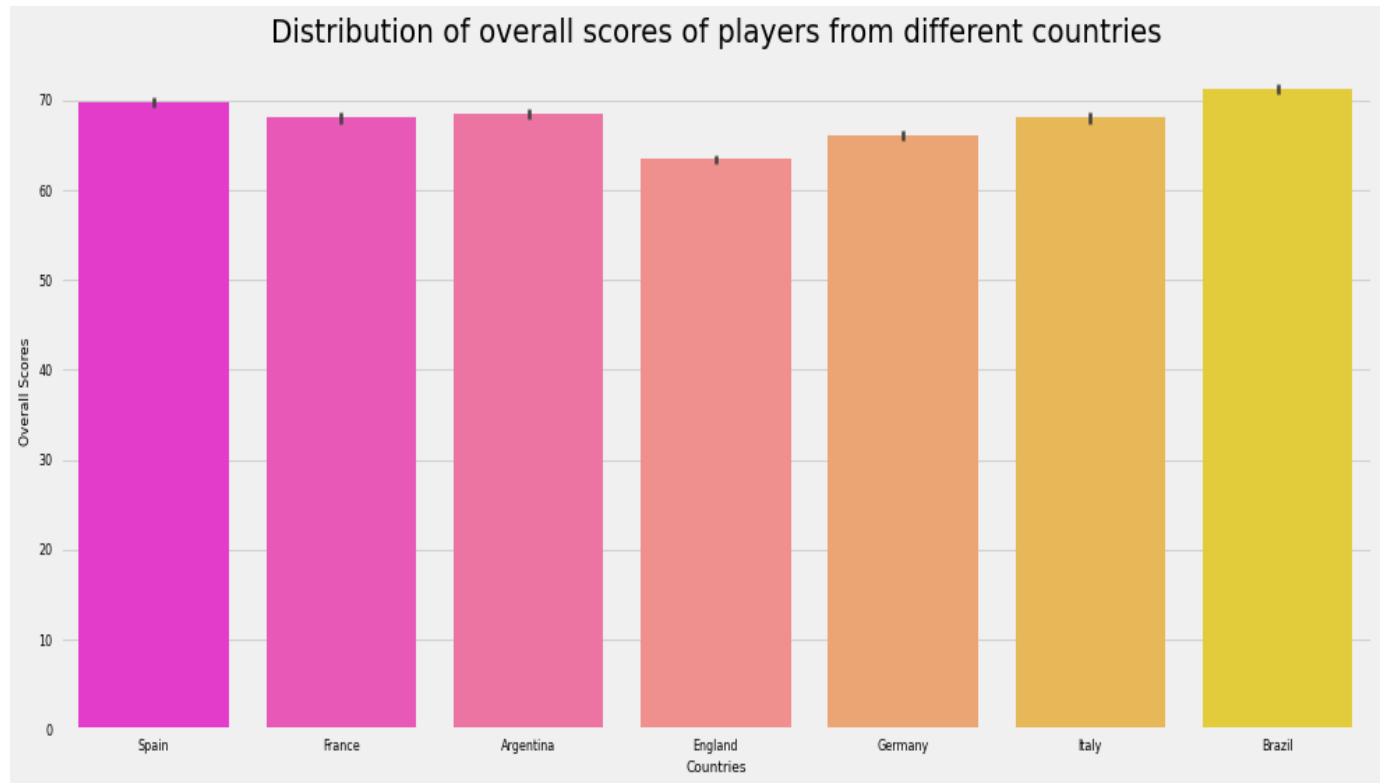
Distribution of International Repuatation of players from different countries
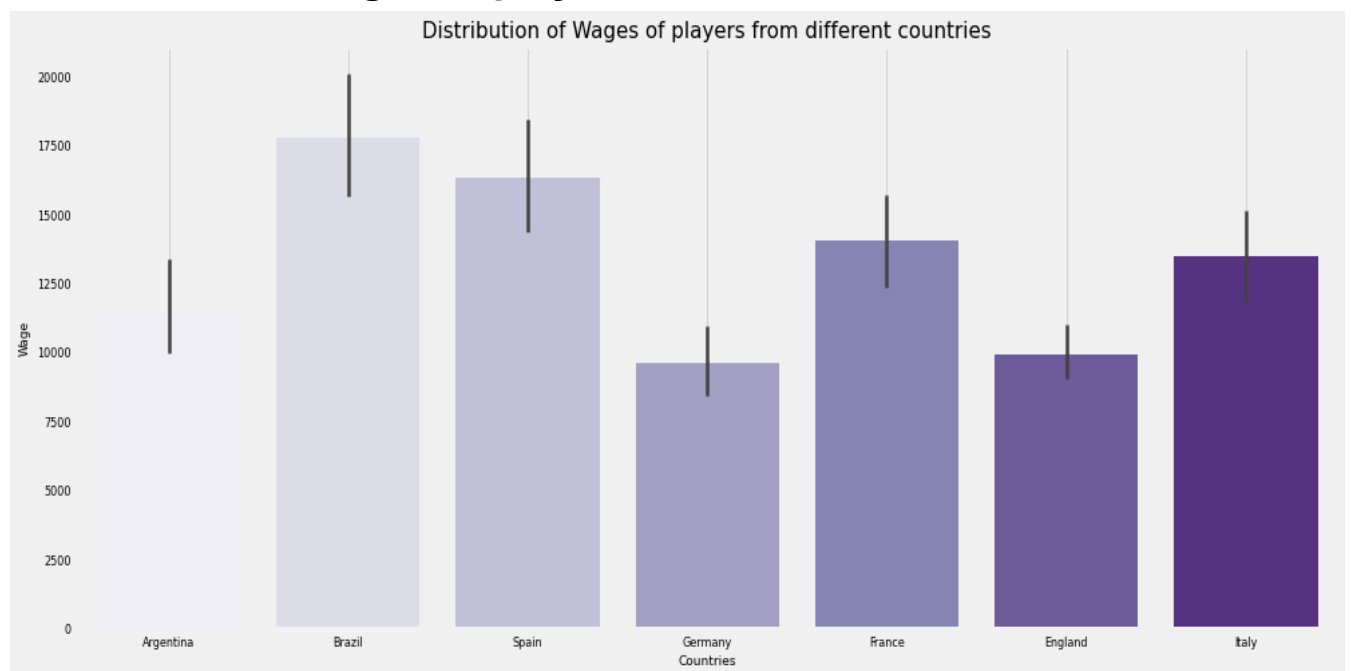
Distribution of Overall Score in Different popular Clubs
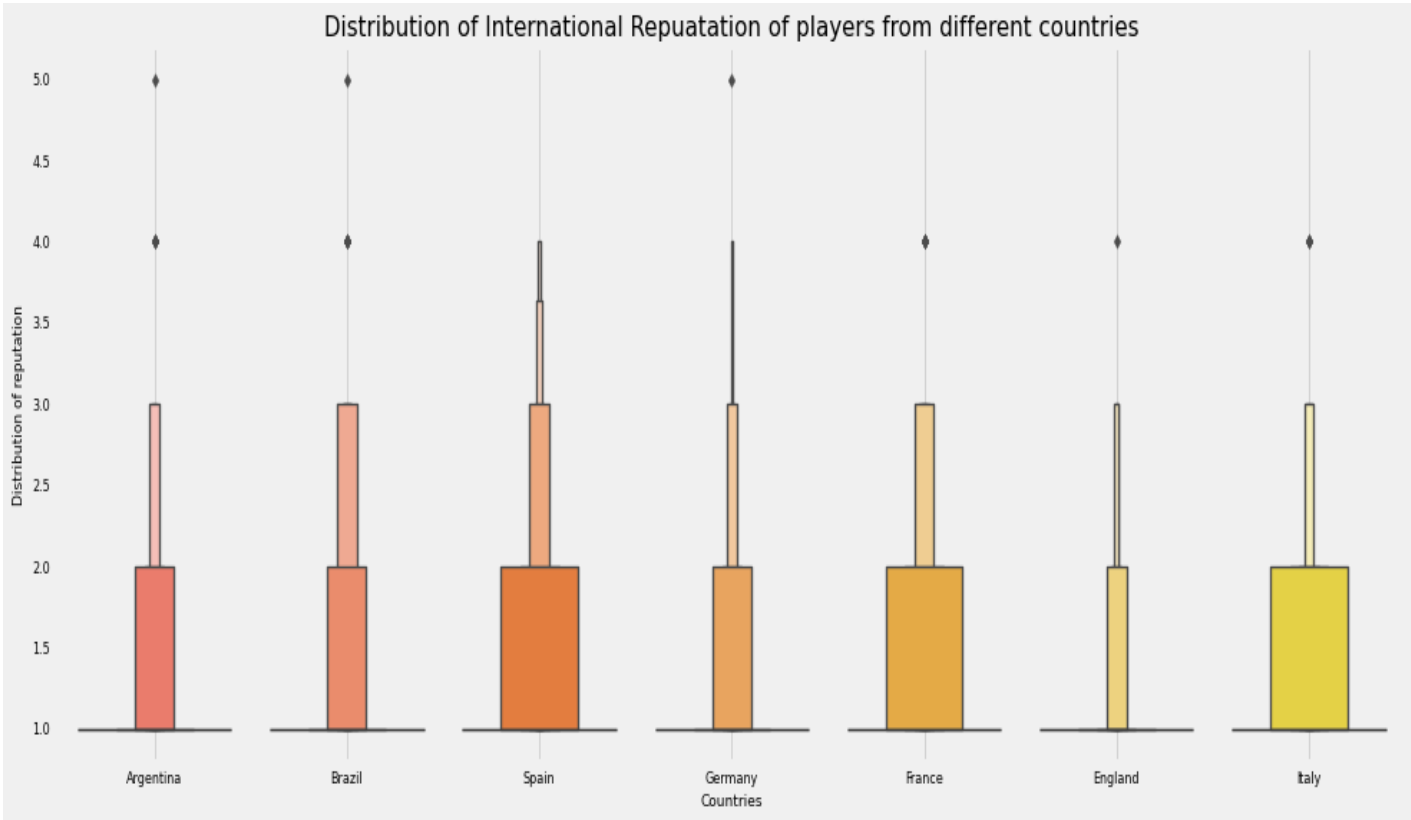
Distribution of Overall Score in Different popular Clubs
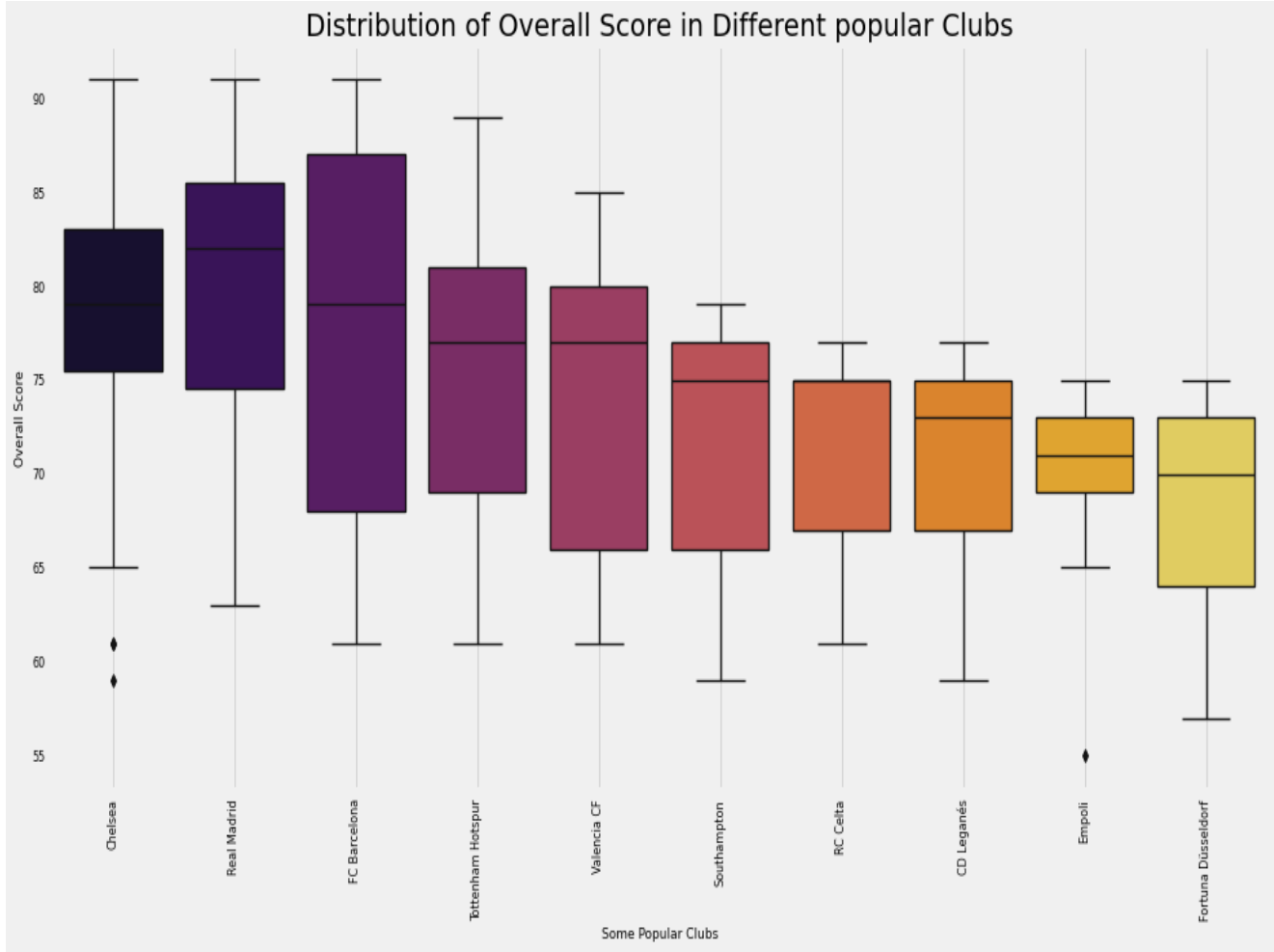
Distribution of Ages in some Popular Clubs
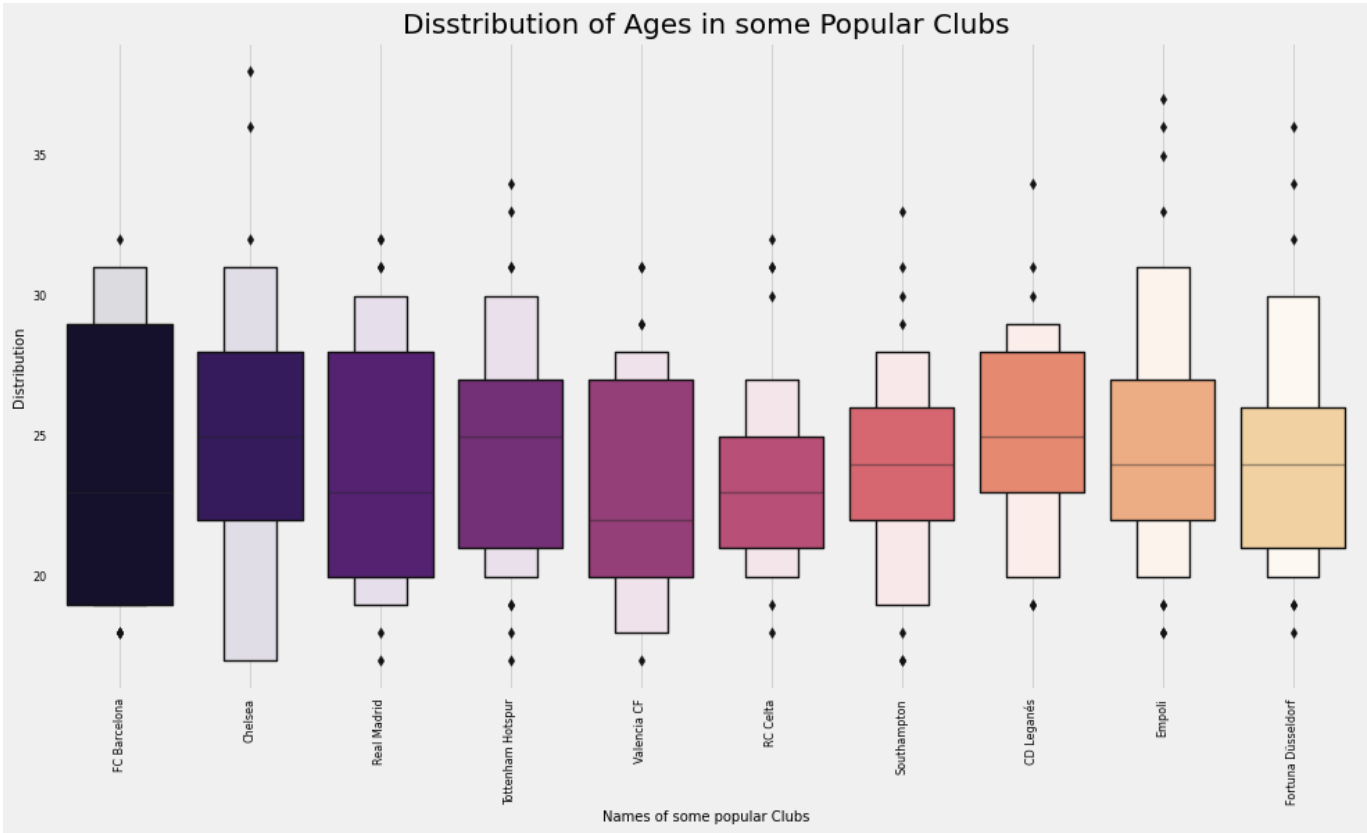
Distribution of Wages in some Popular Clubs

Disstribution of Wages in some Popular Clubs

Distribution of International Reputation in some Popular Clubs

Distribution of International Reputation in some Popular Clubs

Query Analysis

Best Players per each position with their age, club, and nationality based on their Overall Scores

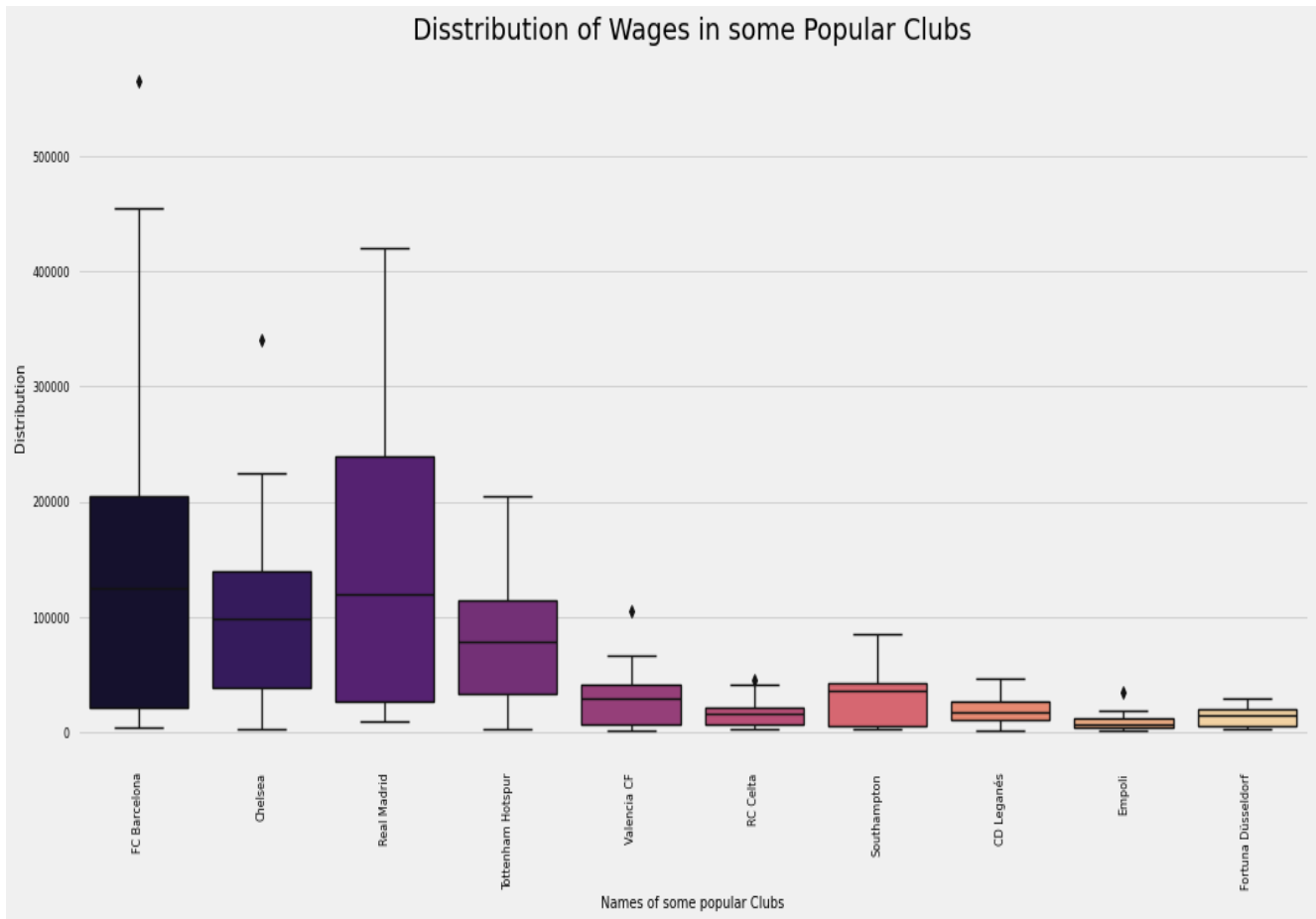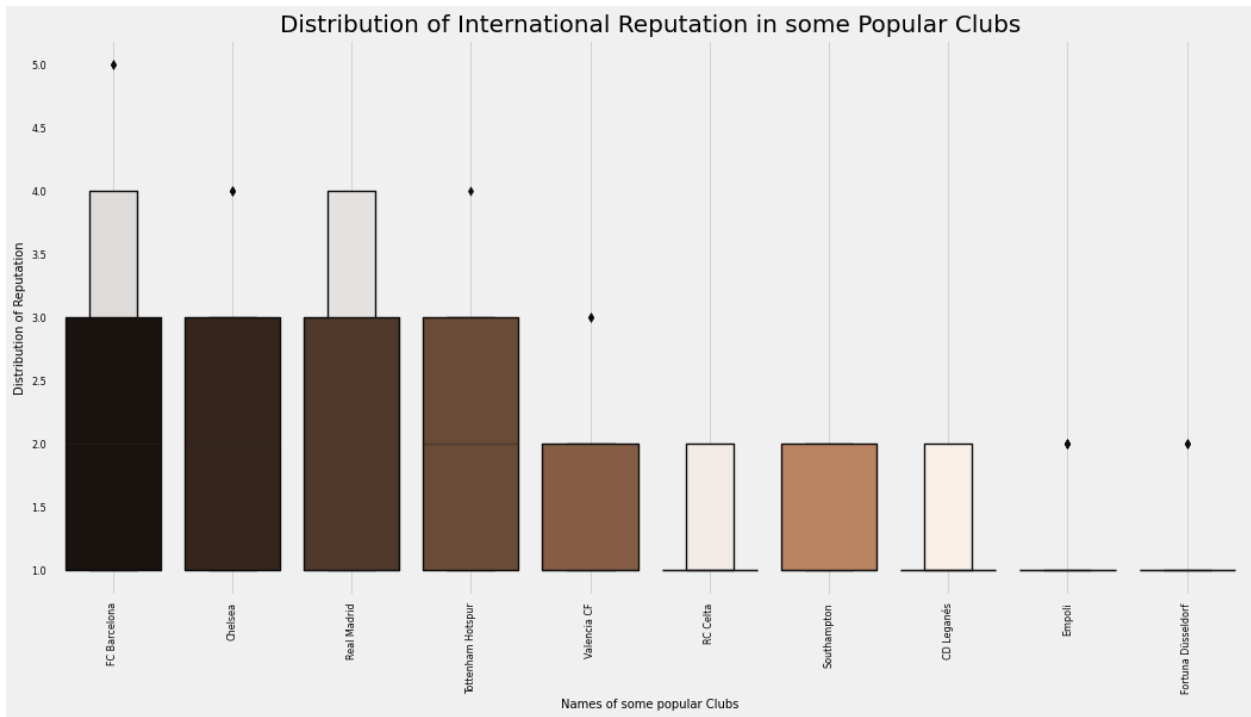|	Position	Name	Age	Club	Nationality	Overall
1	ST	Cristiano Ronaldo	33	Juventus	Portugal	94
0	RF	L. Messi	31	FC Barcelona	Argentina	94
2	LW	Neymar Jr	26	Paris Saint-Germain	Brazil	92
5	LF	E. Hazard	27	Chelsea	Belgium	91
7	RS	L. Suárez	31	FC Barcelona	Uruguay	91
4	RCM	K. De Bruyne	27	Manchester City	Belgium	91
3	GK	De Gea	27	Manchester United	Spain	91
8	RCB	Sergio Ramos	32	Real Madrid	Spain	91
12	CB	D. Godín	32	Atlético Madrid	Uruguay	90
11	LCM	T. Kroos	28	Real Madrid	Germany	90
17	CAM	A. Griezmann	27	Atlético Madrid	France	89
24	LCB	G. Chiellini	33	Juventus	Italy	89
20	CDM	Sergio Busquets	29	FC Barcelona	Spain	89
21	LS	E. Cavani	31	Paris Saint-Germain	Uruguay	89
33	LM	P. Aubameyang	29	Arsenal	Gabon	88
35	LB	Marcelo	30	Real Madrid	Brazil	88
28	LAM	J. Rodríguez	26	FC Bayern München	Colombia	88
25	RM	K. Mbappé	19	Paris Saint-Germain	France	88
45	RDM	P. Pogba	25	Manchester United	France	87
69	RB	Azpilicueta	28	Chelsea	Spain	86
67	CM	Thiago	27	FC Bayern München	Spain	86
56	RW	Bernardo Silva	23	Manchester City	Portugal	86
129	RAM	J. Cuadrado	30	Juventus	Colombia	84

Youngest Players from the FIFA 2019

	Name	Age	Club	Nationality	Overall
11457	W. Geubbels	16	AS Monaco	France	64
11732	A. Taoui	16	Toulouse Football Club	France	64
12496	Pelayo Morilla	16	Real Sporting de Gijón	Spain	63
12828	Guerrero	16	CF Rayo Majadahonda	Spain	63
13293	H. Massengo	16	AS Monaco	France	62

Eldest Players from FIFA 2019

	Name	Age	Club	Nationality	Overall
4741	O. Pérez	45	Pachuca	Mexico	71
18183	K. Pilkington	44	Cambridge United	England	48
17726	T. Warner	44	Accrington Stanley	Trinidad & Tobago	53
10545	S. Narazaki	42	Nagoya Grampus	Japan	65
7225	C. Muñoz	41	CD Universidad de Concepción	Argentina	68
1120	J. Villar	41	No Club	Paraguay	77
12192	H. Sulaimani	41	Ohod Club	Saudi Arabia	63
15426	M. Tyler	41	Peterborough United	England	59
4228	B. Nivet	41	ESTAC Troyes	France	71
10356	F. Kippe	40	Lillestrøm SK	Norway	65
16264	P. van der Vlag	40	FC Emmen	Netherlands	58
9484	B. Castillo	40	Atlético Huila	Colombia	66
4187	C. Lucchetti	40	Atlético Tucumán	Argentina	71

The longest membership in the club

Name	Club	Years_of_member
O. Pérez	Pachuca	30
M. Al Shalhoub	Al Hilal	23
H. Sogahata	Kashima Antlers	23
M. Ogasawara	Kashima Antlers	23
S. Narazaki	Nagoya Grampus	22
M. Wölfli	BSC Young Boys	21
K. Kitamoto	Vissel Kobe	21
C. Källqvist	BK Häcken	20
Y. Endo	Gamba Osaka	20
S. Pellissier	Chievo Verona	19

Top 10 left footed footballers

	Name	Age	Club	Nationality	Overall
0	L. Messi	31	FC Barcelona	Argentina	94
13	David Silva	32	Manchester City	Spain	90
15	P. Dybala	24	Juventus	Argentina	89
17	A. Griezmann	27	Atlético Madrid	France	89
19	T. Courtois	26	Real Madrid	Belgium	89
24	G. Chiellini	33	Juventus	Italy	89
35	Marcelo	30	Real Madrid	Brazil	88
37	H. Lloris	31	Tottenham Hotspur	France	88
36	G. Bale	28	Real Madrid	Wales	88
28	J. Rodríguez	26	FC Bayern München	Colombia	88

Top 10 Right footed footballers

	Name	Age	Club	Nationality	Overall
1	Cristiano Ronaldo	33	Juventus	Portugal	94
2	Neymar Jr	26	Paris Saint-Germain	Brazil	92
3	De Gea	27	Manchester United	Spain	91
4	K. De Bruyne	27	Manchester City	Belgium	91
5	E. Hazard	27	Chelsea	Belgium	91
6	L. Modrić	32	Real Madrid	Croatia	91
7	L. Suárez	31	FC Barcelona	Uruguay	91
8	Sergio Ramos	32	Real Madrid	Spain	91
9	J. Oblak	25	Atlético Madrid	Slovenia	90
10	R. Lewandowski	29	FC Bayern München	Poland	90

PLOT-Comparing the performance of left-footed and right-footed footballers Ballcontrol vs Dribbling