

Analysis of European Soccer

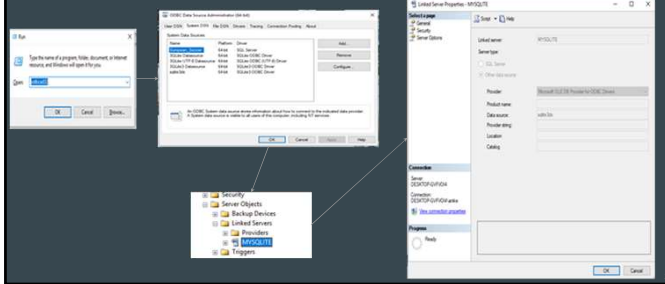


SAHAJ GANDHI | ANIKET GIRIYALKAR | ADITYA KALYAN JAYANTI

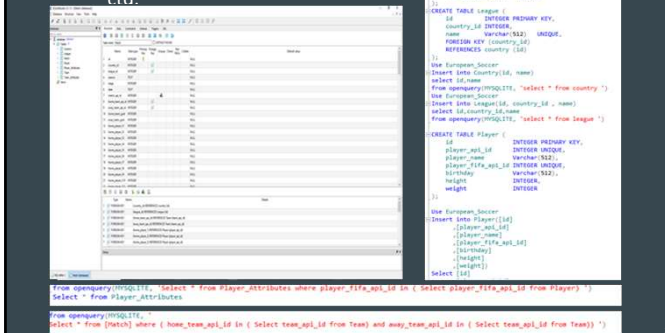
CSCI 620 | 04/25/2018

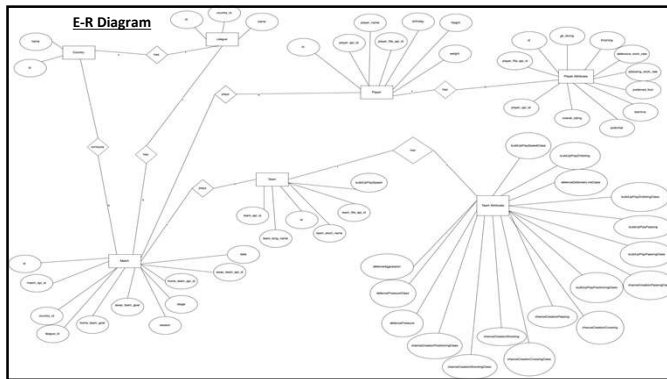
1

Transferring database from SQLite to SSMS



SQLite to SSMS transfer cmd.

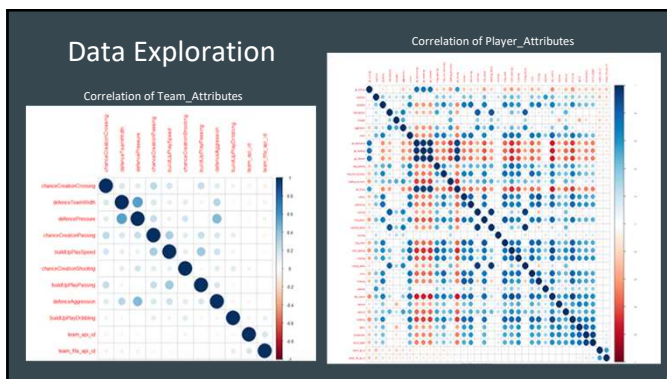




Opening Database Tables in R & Rattle

- ODBC aims to provide common API access to SQL based data management systems.

- A connection to a specific database is called a Data Source Name or DSN.
- To make an ODBC connection:
 - library(RODBC)
 - Channel -> odbcConnect('Football/DSN')



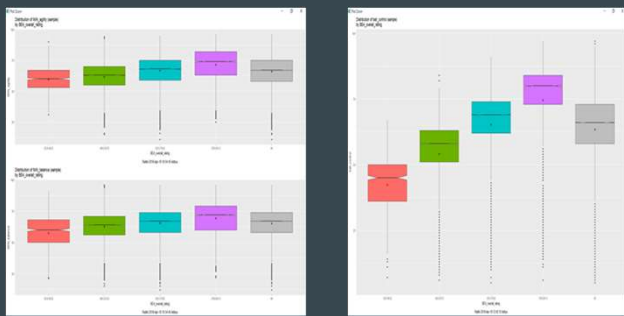
Cleaning and Exploration of Data

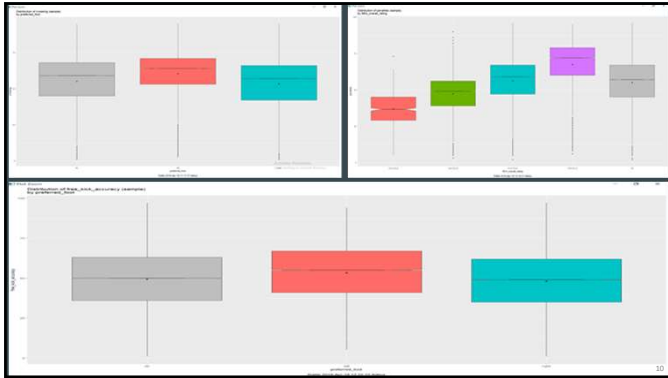
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weight	Numeric	1 to 100	0
bmi	Numeric	1 to 100	0
smoking_status	Categorical	1 to 2	0
alcohol_consumption	Numeric	1 to 100	0
physical_activity	Numeric	1 to 100	0
sleeping_hours	Numeric	1 to 100	0
stress_level	Numeric	1 to 100	0
mood	Numeric	1 to 100	0
energy_level	Numeric	1 to 100	0
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memory_level	Numeric	1 to 100	0
creativity_level	Numeric	1 to 100	0
emotional_stability	Numeric	1 to 100	0
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communication_skills	Numeric	1 to 100	0
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planning_skills	Numeric	1 to 100	0
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flexibility_skills	Numeric	1 to 100	0
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enthusiasm_skills	Numeric	1 to 100	0
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diligence_skills	Numeric	1 to 100	0
industriousness_skills	Numeric	1 to 100	0
hardworking_skills	Numeric	1 to 100	0
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clever_skills	Numeric	1 to 100	0
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competent_skills	Numeric	1 to 100	0
proficient_skills	Numeric	1 to 100	0
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masterful_skills	Numeric	1 to 100	0
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prodigy_skills	Numeric	1 to 100	0

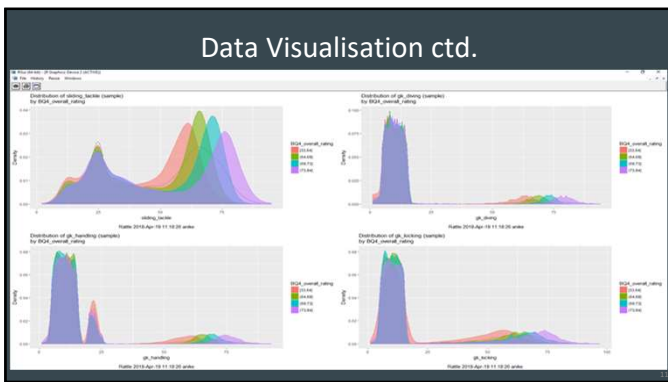
Transformation of Data

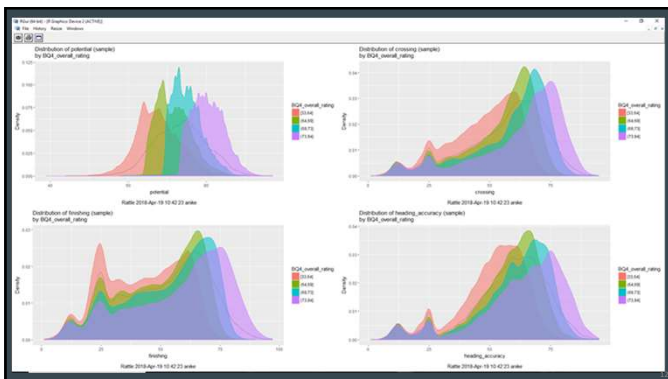
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masterful_skills	Numeric	1 to 100	0
virtuoso_skills	Numeric	1 to 100	0
prodigy_skills	Numeric	1 to 100	0

Data Visualization









SQL Queries

player_id	player_name	Station_average
1	30551	
2	30553	
3	30555	
4	30524	
5	30524	
6	30534	
7	30529	
8	30554	
9	30513	
10	31459	

Name	Heading_Accuracy	Interceptions	Staling_Tackles	Scoring_Tackles	Aggression	Strength	Rating	Age	Player_Status
1	30551	92	92	92	92	92	92	92	92
2	30553	92	92	92	92	92	92	92	92
3	30555	92	92	92	92	92	92	92	92
4	30524	92	92	92	92	92	92	92	92
5	30524	92	92	92	92	92	92	92	92
6	30534	92	92	92	92	92	92	92	92
7	30529	92	92	92	92	92	92	92	92
8	30554	92	92	92	92	92	92	92	92
9	30513	92	92	92	92	92	92	92	92
10	31459	92	92	92	92	92	92	92	92

Name	Heading_Accuracy	Interceptions	Staling_Tackles	Scoring_Tackles	Aggression	Strength	Rating	Age	Player_Status
1	30551	92	92	92	92	92	92	92	92
2	30553	92	92	92	92	92	92	92	92
3	30555	92	92	92	92	92	92	92	92
4	30524	92	92	92	92	92	92	92	92
5	30524	92	92	92	92	92	92	92	92
6	30534	92	92	92	92	92	92	92	92
7	30529	92	92	92	92	92	92	92	92
8	30554	92	92	92	92	92	92	92	92
9	30513	92	92	92	92	92	92	92	92
10	31459	92	92	92	92	92	92	92	92

Name	Heading_Accuracy	Interceptions	Staling_Tackles	Scoring_Tackles	Aggression	Strength	Rating	Age	Player_Status
1	30551	92	92	92	92	92	92	92	92
2	30553	92	92	92	92	92	92	92	92
3	30555	92	92	92	92	92	92	92	92
4	30524	92	92	92	92	92	92	92	92
5	30524	92	92	92	92	92	92	92	92
6	30534	92	92	92	92	92	92	92	92
7	30529	92	92	92	92	92	92	92	92
8	30554	92	92	92	92	92	92	92	92
9	30513	92	92	92	92	92	92	92	92
10	31459	92	92	92	92	92	92	92	92

Goals_by_foot	preferred_foot	Percentage
1	44733	24.320797699112
2	130409	75.251319802749

Name	Goalkeeper	Goalkeeper	Goalkeeper	Goalkeeper	Goalkeeper	Goalkeeper	Goalkeeper	Goalkeeper	Goalkeeper
1	30551	92	92	92	92	92	92	92	92
2	30553	92	92	92	92	92	92	92	92
3	30555	92	92	92	92	92	92	92	92
4	30524	92	92	92	92	92	92	92	92
5	30524	92	92	92	92	92	92	92	92
6	30534	92	92	92	92	92	92	92	92
7	30529	92	92	92	92	92	92	92	92
8	30554	92	92	92	92	92	92	92	92
9	30513	92	92	92	92	92	92	92	92
10	31459	92	92	92	92	92	92	92	92

Name	Heading_Accuracy	Interceptions	Staling_Tackles	Scoring_Tackles	Aggression	Strength	Rating	Age	Player_Status
1	30551	92	92	92	92	92	92	92	92
2	30553	92	92	92	92	92	92	92	92
3	30555	92	92	92	92	92	92	92	92
4	30524	92	92	92	92	92	92	92	92
5	30524	92	92	92	92	92	92	92	92
6	30534	92	92	92	92	92	92	92	92
7	30529	92	92	92	92	92	92	92	92
8	30554	92	92	92	92	92	92	92	92
9	30513	92	92	92	92	92	92	92	92
10	31459	92	92	92	92	92	92	92	92

	name	lifetime Rating	Defender Rating	Striker Rating	Goalkeeper Rating	Goal Player Position
1	Luis Suarez	92	38	90	12	Striker
2	Christiano Ronaldo	91	46	89	13	Striker
3	Frank Ribbe	88	43	85	12	Striker
4	Andres Iniesta	88	61	84	12	Attacking Midfielder
5	Zlatan Ibrahimovic	85	53	87	15	Striker
6	Alan Hansen	87	44	84	12	Attacking Midfielder
7	Alen Robidan	87	40	85	13	Striker
8	Wayne Rooney	87	40	84	10	Attacking Midfielder
9	David Silva	86	44	84	11	Striker
10	Robin van Persie	86	44	85	9	Striker
11	Philipp Lahm	86	79	74	10	Defensive Midfielder
12	Bar Casillas	86	31	32	85	Goalkeeper
13	Cesc Fabregas	86	64	85	13	Attacking Midfielder
14	Gerard Pique	86	38	85	14	Striker
15	Luis Suarez	85	53	84	29	Striker
16	Remco Wilt	85	86	53	11	Defender
17	Her Cuah	85	32	31	84	Goalkeeper
18	Darko Ruffin	85	35	33	82	Goalkeeper
19	Cedric Faur	85	87	58	13	Defender
20	Yves Touss	85	81	78	11	Defensive Midfielder
21	Carles Torres	85	57	84	8	Striker
22	Robert Schuster	85	75	62	15	Attacking Midfielder
23	Manuel Neuer	85	32	33	84	Goalkeeper
24	Sergio Reguero	85	85	69	13	Defensive Midfielder
25	Shawn Kempney	84	83	67	10	Defensive Midfielder
26	George Cheble	84	85	55	8	Defender
27	Shelton Stephens	84	87	62	12	Attacking Midfielder
28	Daniel Rivas	84	78	75	11	Defensive Midfielder
29	Edson van der Sar	84	44	32	83	Goalkeeper
30	Andria Pini	84	62	81	7	Attacking Midfielder
31	Kato Romes	84	77	77	12	Defensive Midfielder

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country_name	league_name	season	number_of_players	number_of_teams	avg_points_per_game	avg_goals_per_game	avg_goals_per_game	avg_goals_per_game	avg_goals_per_game	total_goals
Spain	Spain LIGA BBVA	2009-2009	38	20	1	1	0	2	1101	
Spain	Spain LIGA BBVA	2010-2010	38	20	1	1	0	2	1091	
England	England Premier League	2011-2012	38	20	1	1	0	2	1086	
England	England Premier League	2012-2013	38	20	1	1	0	2	1063	
England	England Premier League	2013-2014	38	20	1	1	0	2	1063	
England	England Premier League	2014-2015	38	20	1	1	0	2	1052	
Spain	Spain LIGA BBVA	2015-2016	38	20	1	1	0	2	1050	
Spain	Spain LIGA BBVA	2016-2017	38	20	1	1	0	2	1045	
Spain	Spain LIGA BBVA	2017-2018	38	20	1	1	0	2	1043	
Spain	Spain LIGA BBVA	2018-2019	38	20	1	1	0	2	1042	
Italy	Italy Serie A	2013-2014	38	20	1	1	0	2	1035	
Italy	Italy Serie A	2014-2015	38	20	1	1	0	2	1023	
Italy	Italy Serie A	2015-2016	38	20	1	1	0	2	1026	
Italy	Italy Serie A	2016-2017	38	20	1	1	0	2	1018	
Italy	Italy Serie A	2017-2018	38	20	1	1	0	2	1009	
Italy	Italy Serie A	2018-2019	38	20	1	1	0	2	1003	
Netherlands	Netherlands Eredivisie	2011-2012	34	18	1	1	0	3	987	
Netherlands	Netherlands Eredivisie	2012-2013	34	18	1	1	0	3	982	
Netherlands	Netherlands Eredivisie	2013-2014	34	18	1	1	0	3	980	
Netherlands	Netherlands Eredivisie	2014-2015	34	18	1	1	0	3	977	
Netherlands	Netherlands Eredivisie	2015-2016	34	18	1	1	0	3	979	
Netherlands	Netherlands Eredivisie	2016-2017	34	18	1	1	0	3	978	
England	England Premier League	2016-2017	38	20	1	1	0	3	976	
France	France Ligue 1	2012-2013	38	20	1	1	0	2	967	
Germany	Germany 1 Bundesliga	2013-2014	34	18	1	1	0	3	967	
Netherlands	Netherlands Eredivisie	2012-2013	34	18	1	1	0	3	964	
France	France Ligue 1	2015-2016	38	20	1	1	0	2	960	
France	France Ligue 1	2011-2012	38	20	1	1	0	2	958	

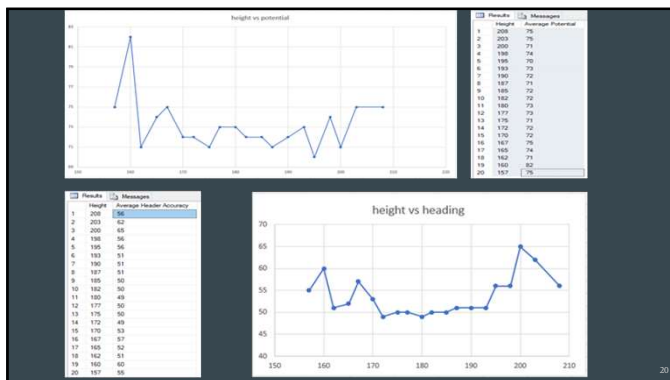
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id	country	league_name	season	date	home_team	away_team	home_team_goals	away_team_goals	win_loss_draw_ties
1	Belgium	Belgium Jupiler League	2009-2009	2009-09-17	KRC Genk	Beerschot AC	1	1	3
2	Belgium	Belgium Jupiler League	2009-2009	2009-09-16	SV Zulte Waregem	Sporting Lukens	0	0	3
3	Belgium	Belgium Jupiler League	2009-2009	2009-09-16	KSV Cercle Brugge	RSC Anderlecht	0	3	2
4	Belgium	Belgium Jupiler League	2009-2009	2009-09-17	KAA Gent	RACEX Mone	5	0	1
5	Belgium	Belgium Jupiler League	2009-2009	2009-09-24	KV Mechelen	Club Brugge KV	1	1	3
6	Belgium	Belgium Jupiler League	2009-2009	2009-09-16	KSV Roeselare	KV Kortrijk	2	2	3
7	Belgium	Belgium Jupiler League	2009-2009	2009-09-16	KVC Westerlo	Sporting Chateaux	1	0	1
8	Belgium	Belgium Jupiler League	2009-2009	2009-11-01	Club Brugge KV	KV Kortrijk	4	1	1
9	Belgium	Belgium Jupiler League	2009-2009	2009-10-31	Standard de Liège	Sporting Chateaux	1	2	2
10	Belgium	Belgium Jupiler League	2009-2009	2009-11-02	SV Zulte Waregem	KAA Gent	0	2	2
11	Belgium	Belgium Jupiler League	2009-2009	2009-11-01	Sporting Lukens	RACEX Mone	0	0	3
12	Belgium	Belgium Jupiler League	2009-2009	2009-11-01	KV Mechelen	KSV Roeselare	1	2	2
13	Belgium	Belgium Jupiler League	2009-2009	2009-11-02	Beerschot AC	RSC Anderlecht	1	3	2
14	Belgium	Belgium Jupiler League	2009-2009	2009-11-08	RSC Anderlecht	Sporting Lukens	2	3	2
15	Belgium	Belgium Jupiler League	2009-2009	2009-11-09	Sporting Chateaux	Club Brugge KV	2	2	3
16	Belgium	Belgium Jupiler League	2009-2009	2009-11-07	KSV Cercle Brugge	SV Zulte Waregem	2	0	1
17	Belgium	Belgium Jupiler League	2009-2009	2009-11-08	KV Kortrijk	KV Mechelen	0	0	3
18	Belgium	Belgium Jupiler League	2009-2009	2009-11-08	KVC Westerlo	KRC Genk	1	0	1
19	Belgium	Belgium Jupiler League	2009-2009	2009-11-09	Beerschot AC	Standard de Liège	1	3	2
20	Belgium	Belgium Jupiler League	2009-2009	2009-11-15	Club Brugge KV	RSC Anderlecht	1	1	3
21	Belgium	Belgium Jupiler League	2009-2009	2009-11-15	KRC Genk	KSV Roeselare	1	1	3
22	Belgium	Belgium Jupiler League	2009-2009	2009-11-15	SV Zulte Waregem	Beerschot AC	2	2	3
23	Belgium	Belgium Jupiler League	2009-2009	2009-11-16	Sporting Lukens	Standard de Liège	1	1	3
24	Belgium	Belgium Jupiler League	2009-2009	2009-11-15	KV Mechelen	RACEX Mone	0	0	3
25	Belgium	Belgium Jupiler League	2009-2009	2009-11-14	KVC Westerlo	KAA Gent	3	2	1
26	Belgium	Belgium Jupiler League	2009-2009	2009-11-22	RSC Anderlecht	KVC Westerlo	2	0	1
27	Belgium	Belgium Jupiler League	2009-2009	2009-11-22	RACEX Mone	Club Brugge KV	1	2	2
28	Belgium	Belgium Jupiler League	2009-2009	2009-11-22	KSV Cercle Brugge	KV Mechelen	2	3	1
29	Belgium	Belgium Jupiler League	2009-2009	2009-11-23	KAA Gent	KRC Genk	2	3	2
30	Belgium	Belgium Jupiler League	2009-2009	2009-11-23	KVC Westerlo	KRC Genk	2	0	1

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player_id	player_name	relative_average	Name	Age	Name	Age		
1	20001	90	1	Albert Fontana	51	1	Edmondson Bergelson	33
2	20003	91	2	Dean Vinodas	49	2	Abdulkader Ghannoul	33
3	20009	88	3	Lucia Bucci	49	3	Abel Aguilar	33
4	20024	88	4	Paula Mayers	49	4	Abraham Kulamoor	33
5	20124	88	5	Rob van Dijk	49	5	Adam Cullen	33
6	20234	87	6	Francesco Vittoni	48	6	Adam Fekedulegn	33
7	20029	87	7	Hans Vink	48	7	Adnan Colakovic	33
8	20054	87	8	Jana Lohmann	48	8	Adrian	33
9	20013	86	9	Michael Teneal	48	9	Amrout Ajmalh Barakat	33
10	21499	86	10	Antonio Chaves	47	10	Alan Hutton	33
11	20037	86	11	Chris Swales	47	11	Alan O'Brien	33
12	20084	86	12	David James	47	12	Albert Elving	33
13	20043	86	13	David Wier	47	13	Alberto Aquilino	33
14	21412	86	14	Dean Kelly	47	14	Alberto Garcia	33
15	20072	85	15	Edwin van der Sar	47	15	Alexandro Vasilak	33
16	20061	85	16	Eugenio Corno	47	16	Alexandro Mate	33
17	20017	85	17	Lee Rubin	47	17	Alan Burre	33
18	20120	85	18	Nico van Kerkhoven	47	18	Alan Shaw	33
19	20117	85	19	Pablo Ponce	47	19	Alexander Farnell	33
20	20026	85	20	Severin Bockhorst	47	20	Alexander Lane	33
21	21209	85	21	Tugay Kemeroglu	47	21	Alexander Tadić	33
22	21251	85	22	Billy Wilson	46	22	Alena Thielman	33
23	20085	85	23	Brad Friedel	46	23	Alenka Borja Ljendrić	33
24	20039	85	24	Cesar Sanchez	46	24	Alvaro Gonzalez	33
25	20062	85	25	Christophe Renard	46	25	Amel Al-Husseini	33

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