

# DashKick

## analytics



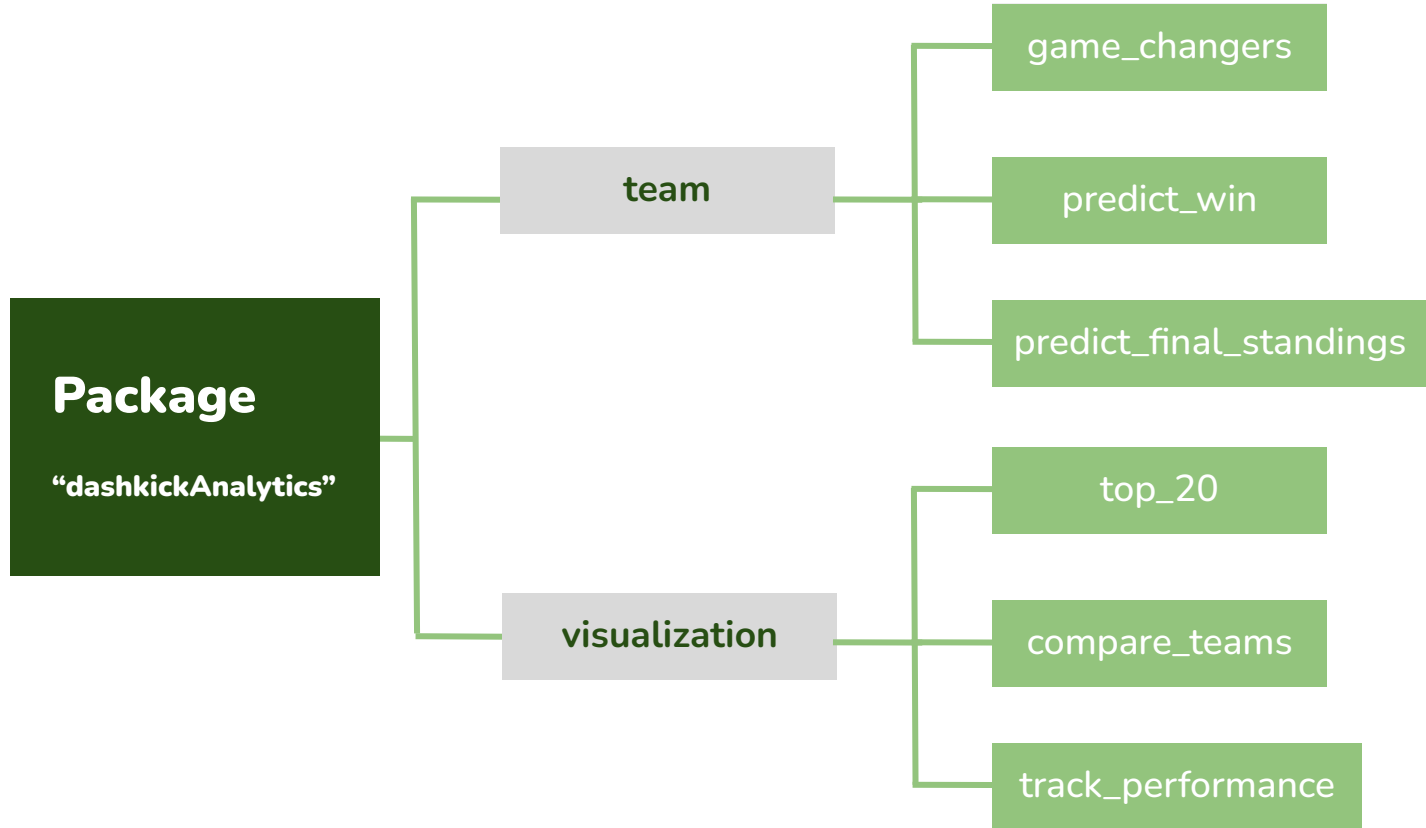
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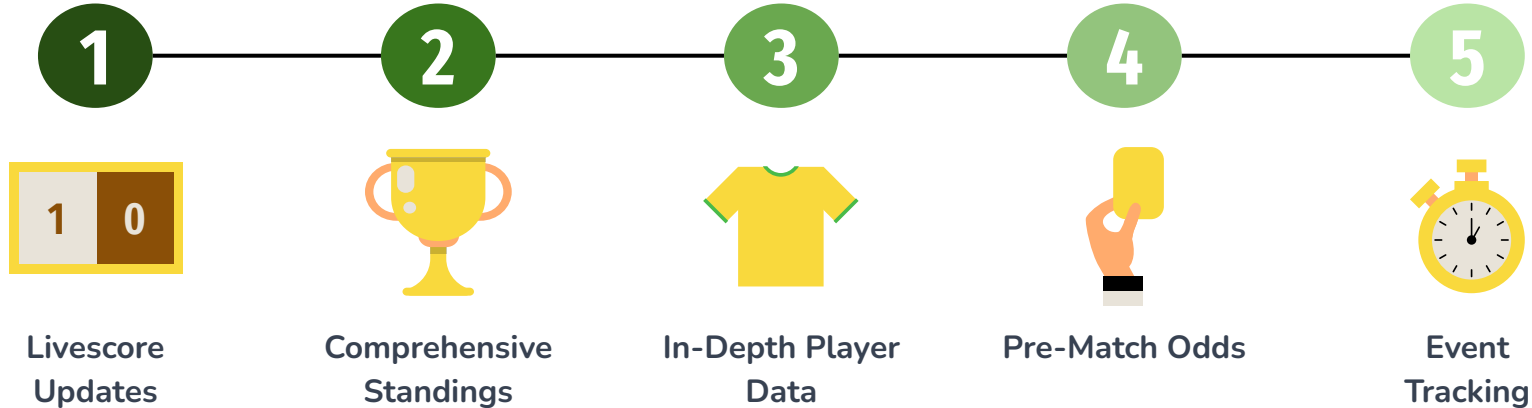
# Package Structure



# API Selection

The Restful API we chose for this project is [API-Football](#). This soccer API, powered by RapidAPI.com, provides comprehensive real-time and historical information on over 1,000 global leagues and cups. Its integration through RapidAPI.com ensures reliability and seamless implementation for users.

## → Key Features:



# Sample Data

Below are snapshots of data we pulled from API-Football (in R):

[illegible]

Comprehensive players data  
(from the Premier League) with  
**33 different statistics**

Comprehensive fixture data  
(from the Premier League) with  
**12 different statistics**

	FixtureDate	Timestamp	Stadium	Status	HomeTeam	AwayTeam	Home_winner	FT_ScoreHome	FT_ScoreAway
1	2023-08-11T19:00:00+00:00	1691780400	Turf Moor	FT	Burnley	Manchester City	FALSE	0	3
2	2023-08-12T11:30:00+00:00	1691839800	Emirates Stadium	FT	Arsenal	Nottingham Forest	TRUE	2	1
3	2023-08-12T14:00:00+00:00	1691848800	Vitality Stadium	FT	Bournemouth	West Ham	NA	1	1
4	2023-08-12T14:00:00+00:00	1691848800	The American Express Community Stadium	FT	Brighton	Luton	TRUE	4	1
5	2023-08-12T14:00:00+00:00	1691848800	Goodison Park	FT	Everton	Fulham	FALSE	0	1
6	2023-08-12T14:00:00+00:00	1691848800	Bramall Lane	FT	Sheffield Utd	Crystal Palace	FALSE	0	1
7	2023-08-12T16:30:00+00:00	1691857800	St. James' Park	FT	Newcastle	Aston Villa	TRUE	5	1
8	2023-08-13T13:00:00+00:00	1691931600	Gtech Community Stadium	FT	Brentford	Tottenham	NA	2	2
9	2023-08-13T15:30:00+00:00	1691940600	Stamford Bridge	FT	Chelsea	Liverpool	NA	1	1
10	2023-08-14T19:00:00+00:00	1692039600	Old Trafford	FT	Manchester United	Wolves	TRUE	1	0
11	2023-08-20T13:00:00+00:00	1692536400	Villa Park	FT	Aston Villa	Everton	TRUE	4	0
12	2023-08-21T19:00:00+00:00	1692644400	Selhurst Park	FT	Crystal Palace	Arsenal	FALSE	0	1
13	2023-08-19T14:00:00+00:00	1692453600	Craven Cottage	FT	Fulham	Brentford	FALSE	0	3
14	2023-08-19T14:00:00+00:00	1692453600	Adams Way	FT	Liverpool	Bournemouth	TRUE	3	1
15	2023-10-03T18:30:00+00:00	1696357800	Kenilworth Road	FT	Luton	Burnley	TRUE	1	2
16	2023-08-19T19:00:00+00:00	1692371600	Etihad Stadium	FT	Manchester City	Newcastle	TRUE	1	0
17	2023-08-18T18:45:00+00:00	1692384300	The City Ground	FT	Nottingham Forest	Sheffield Utd	TRUE	2	1
18	2023-08-19T16:30:00+00:00	1692462600	Tottenham Hotspur Stadium	FT	Tottenham	Manchester United	TRUE	2	0
19	2023-08-20T15:30:00+00:00	1692545400	London Stadium	FT	West Ham	Chelsea	TRUE	3	1
20	2023-08-19T14:00:00+00:00	1692453600	Molineux Stadium	FT	Wolves	Brighton	FALSE	1	4
21	2023-08-26T11:30:00+00:00	1693049400	Vitality Stadium	FT	Bournemouth	Tottenham	FALSE	0	2
22	2023-08-26T14:00:00+00:00	1693058400	Emirates Stadium	FT	Arsenal	Fulham	NA	2	2
23	2023-08-26T14:00:00+00:00	1693058400	Gtech Community Stadium	FT	Brentford	Crystal Palace	NA	1	1
24	2023-08-26T16:30:00+00:00	1693067400	The American Express Community Stadium	FT	Brighton	West Ham	FALSE	1	3
25	2023-08-27T13:00:00+00:00	1693141200	Turf Moor	FT	Burnley	Aston Villa	FALSE	1	3
26	2023-08-25T19:00:00+00:00	1692990000	Stamford Bridge	FT	Chelsea	Luton	TRUE	3	0

# Package (dashkick\_analytics)

- The **dashkick\_analytics** package is a powerful tool designed to streamline the process of analyzing soccer teams.
- Leveraging advanced analytics and intuitive visualizations, this package aims to provide users with a comprehensive platform for team management, player performance evaluation, and strategic decision-making.

## Modules

- teams: The **teams** module provides essential functions for retrieving the top 20 goal contributors and making predictions of the outcomes and final standings of the 2023-24 season.
- visualizations: The **visualizations** module facilitates the creation of an interactive table displaying top goal scorers, spider plots for comparing metrics between two teams, and a line plot depicting individual teams' performance.

# Module 1 (team.R)

- Uncover the pivotal players shaping the 2023-24 season.
- Gain foresight into match outcomes and final standings for the ongoing Premier League 2023-24 season using our predictive tools.

## Functions

**game\_changers():** Pulls the top 20 goal contributors of the Premier League 2023 season.

	PlayerName	Team	PlayerAge	Appearances	Goals	Assists	PenaltyGoals	GoalsAssists
1	Oliver George Arthur Watkins	Aston Villa	29	22	10	8	0	18
2	Cole Jermaine Palmer	Chelsea	22	20	10	8	10	18
3	Erling Braut Haaland	Manchester City	24	16	14	4	3	18
4	Heung-Min Son	Tottenham	32	20	12	5	1	17
5	Matheus Santos Carneiro da Cunha	Wolves	25	23	9	6	1	15
6	Dominic Ayodele Solanke-Mitchell	Bournemouth	27	22	13	1	1	14
7	Bukayo Ayoyinka Temidayo Saka	Arsenal	23	21	7	6	2	13
8	Hee-Chan Hwang	Wolves	28	20	10	3	1	13
9	Jarrod Bowen	West Ham	28	22	11	2	0	13
10	Richarlison de Andrade	Tottenham	27	20	10	3	0	13
11	Leon Patrick Bailey Butler	Aston Villa	27	21	7	6	0	13
12	Julían Álvarez	Manchester City	24	21	8	5	1	13
13	Anthony Michael Gordon	Newcastle	23	22	7	5	0	12
14	Philip Walter Foden	Manchester City	24	21	5	7	0	12
15	Pascal Groß	Brighton	33	21	3	8	0	11
16	James Michael Edward Ward-Prowse	West Ham	30	22	5	6	2	11
17	Pedro Lomba Neto	Wolves	24	14	2	8	0	10
18	Alexander Isak	Newcastle	25	17	10	0	2	10
19	Kieran John Trippier	Newcastle	34	21	1	9	0	10
20	João Pedro Junqueira de Jesus	Brighton	23	23	8	2	4	10

# Functions

	FixtureDate	TimeStamp		Stadium
1	2023-08-11T19:00:00+00:00	1691780400		Turf Moor
2	2023-08-12T11:30:00+00:00	1691839800		Emirates Stadium
3	2023-08-12T14:00:00+00:00	1691848800		Vitality Stadium
4	2023-08-12T14:00:00+00:00	1691848800	The American Express Community Stadium	
5	2023-08-12T14:00:00+00:00	1691848800		Goodison Park

	Status	HomeTeam	AwayTeam	Home_Winner	FT_ScoreHome
1	FT	Burnley	Manchester City	FALSE	0
2	FT	Arsenal	Nottingham Forest	TRUE	2
3	FT	Bournemouth	West Ham	NA	1
4	FT	Brighton	Luton	TRUE	4
5	FT	Everton	Fulham	FALSE	0

	FT_scoreAway	HT_ScoreHome	HT_scoreAway	Referee	GoalDiff
1	3	0	2	C. Pawson	-3
2	1	2	0	M. Oliver	1
3	1	0	0	P. Bankes	0
4	1	1	0	D. Coote	3
5	1	0	0	S. Attwell	-1

**predict\_win():** Predicts the outcomes of the remaining matches of the 2023 season.

Position	Team	Points	Goal_Difference	Position_Displacement
1	Liverpool	92	53	0
2	Manchester City	90	49	0
3	Arsenal	88	44	0
4	Aston Villa	77	30	0
5	Tottenham	71	20	0
6	Newcastle	65	22	3
7	West Ham	65	8	0
8	Brighton	59	6	0
9	Chelsea	54	2	2
10	Manchester United	54	-2	-4
11	Wolves	54	-2	-1
12	Luton	41	-15	5
13	Everton	40	-11	5
14	Bournemouth	39	-20	-2
15	Brentford	37	-13	0
16	Fulham	36	-16	-3
17	Nottingham Forest	30	-25	-1
18	Crystal Palace	30	-26	-4
19	Burnley	20	-34	0
20	Sheffield Utd	10	-70	0

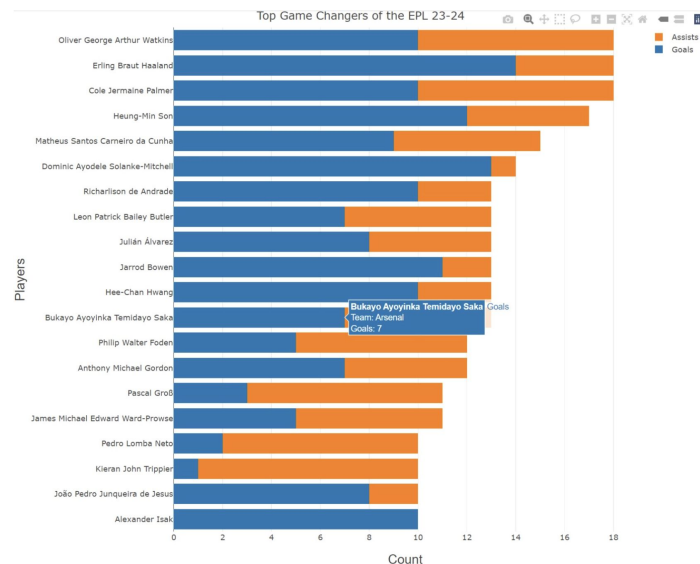
**predict\_final\_standings():** Predicts the final league standing of the 2023 season.

# Module 2 (visualization.R)

- Enhances analytical capabilities, showcasing the top influencers of the Premier League 23-24 season.
- Uncovers a team's performance dynamics over a season and seamlessly compares key attributes between two teams.

## Functions

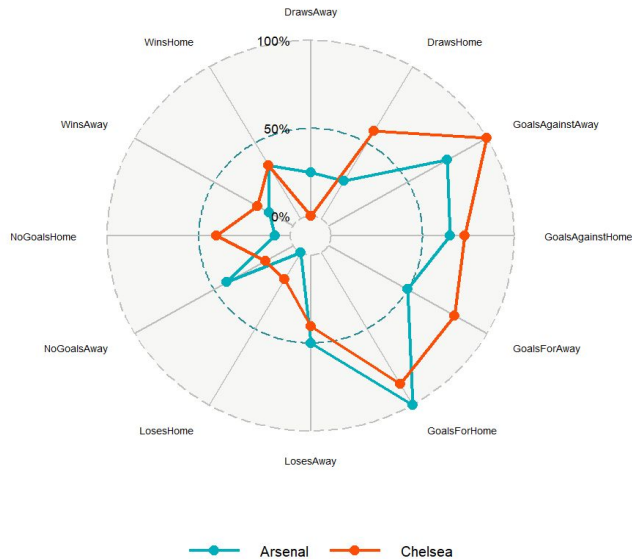
**top\_20():** Displays the top 20 goal contributors in a stacked bar plot format.





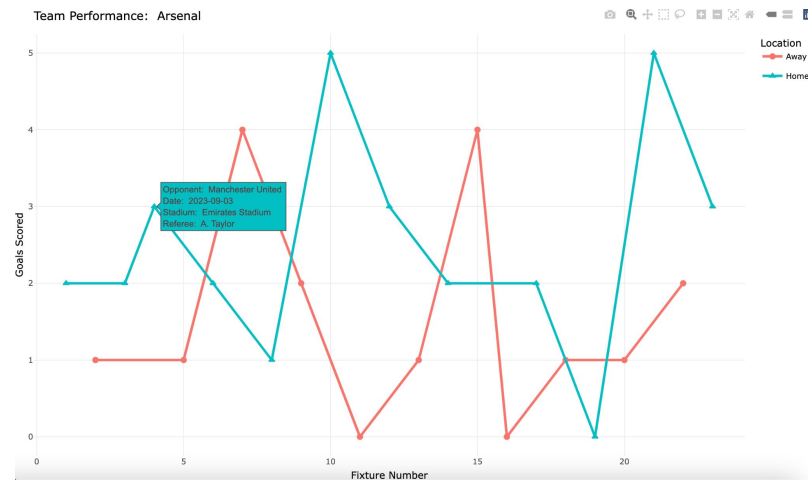
# Functions

Comparison of Team Performance



**compare\_teams(team1, team2):** Create a spider plot to compare performance metrics of two teams.

**track\_performance(team):** Illustrates a team's performance over time with a line plot.



# DashKick Preview



# Thank You

