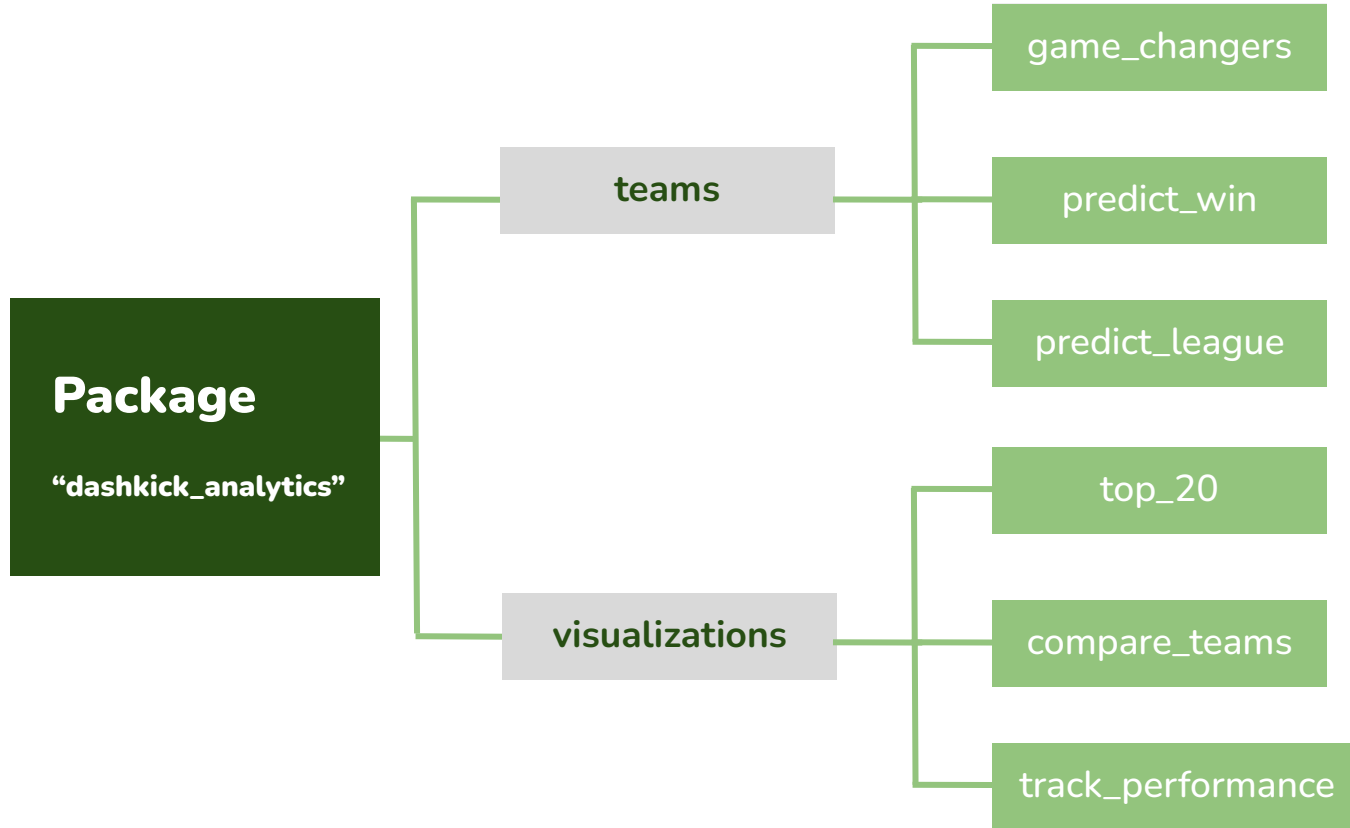# DashKick

analytics

Group 6:
Christopher Prasetya Mulya
Natalie Crystal Coutinho
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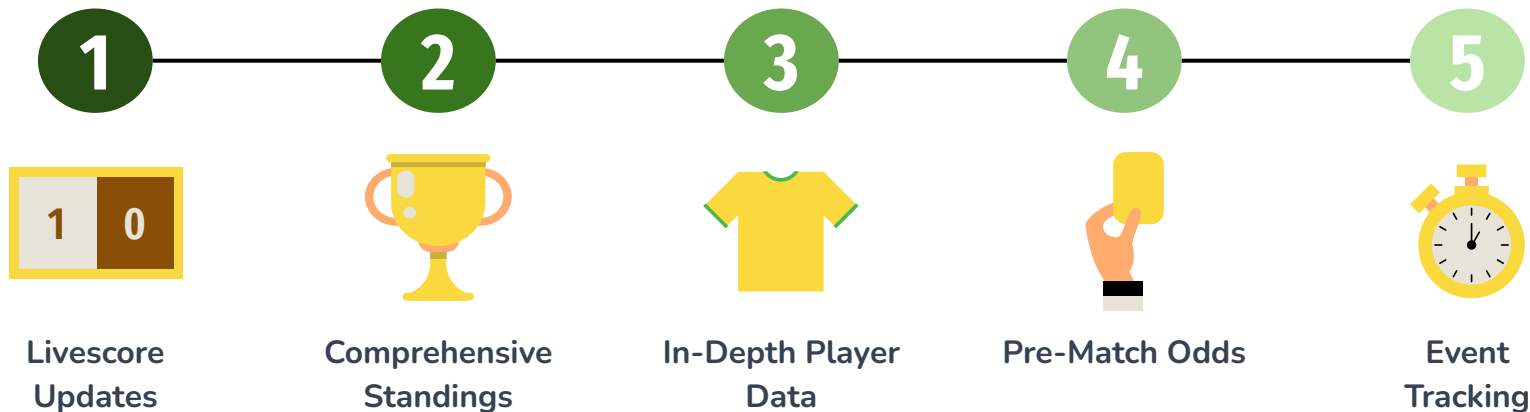
Package Structure

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:**

1	2	3	4	5
Livescore Updates	Comprehensive Standings	In-Depth Player Data	Pre-Match Odds	Event Tracking

Sample Data

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

```
                                PlayerName            TeamName  Position PlayerAge                 Nationality Appearances MinutesPlayed
1                     Diego da Silva Costa              Wolves  Attacker        35                       Spain           0             0
2              Lucas Rodrigues Moura da Silva        Tottenham  Attacker        31                      Brazil           0             0
3   Alexander Mark David Oxlade-Chamberlain         Liverpool Midfielder        30                     England           0             0
4                     Phil Anthony Jones    Manchester United  Defender        31                     England           0             0
5                   Jesse Ellis Lingard Nottingham Forest Midfielder        31                     England           0             0
6                         Manuel Lanzini           West Ham Midfielder        30                   Argentina           0             0
7          João Filipe Iria Santos Moutinho             Wolves Midfielder        37                    Portugal           0             0
8                     Adama Traoré Diarra             Wolves  Attacker        28                       Spain           4            40
9                          Thomas Davies            Everton Midfielder        26                     England           3            57
10            James McFarlane McArthur     Crystal Palace Midfielder        36                    Scotland           0             0
11                       Luka Milivojević     Crystal Palace Midfielder        32                      Serbia           0             0
12               Andros Darryl Townsend            Everton Midfielder        33                     England          12           688
13                         Asmir Begović            Everton Goalkeeper        36       Bosnia and Herzegovina           0             0
14               Felix Junior Stanislas        Bournemouth Midfielder        34                     England           0             0
15                         Ciaran Clark       Sheffield Utd  Defender        34          Republic of Ireland           0             0
16                         Jed John Steer        Aston Villa Goalkeeper        31                     England           0             0
17             Jack Raymond Colback Nottingham Forest Midfielder        34                     England           0             0
18           Lyle James Alfred Taylor Nottingham Forest  Attacker        33                  Montserrat           0             0
19              Matthew Ben Longstaff          Newcastle Midfielder        23                     England           0             0
20                      Ethan James Wady            Chelsea Goalkeeper        21                         USA           0             0
   TotalShots Goals ShotsOnTarget Assists YellowCards RedCards GoalsConceded GoalsSaved TotalPasses KeyPasses AccuratePasses TotalTackles
1           0     0             0       0           0        0             0          0           0         0              0            0
2           0     0             0       0           0        0             0          0           0         0              0            0
```

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  1691780400                             Turf Moor     FT              Burnley     Manchester City       FALSE            0            3
2  2023-08-12T11:30+00:00  1691839800                       Emirates Stadium     FT              Arsenal    Nottingham Forest        TRUE            2            1
3  2023-08-12T14:00+00:00  1691848800                       Vitality Stadium     FT          Bournemouth            West Ham          NA            1            1
4  2023-08-12T14:00+00:00  1691848800 The American Express Community Stadium     FT             Brighton               Luton        TRUE            4            1
5  2023-08-12T14:00+00:00  1691848800                          Goodison Park     FT              Everton              Fulham       FALSE            0            1
6  2023-08-12T14:00+00:00  1691848800                            Bramall Lane     FT        Sheffield Utd      Crystal Palace       FALSE            0            1
7  2023-08-12T16:30+00:00  1691857800                       St. James' Park     FT            Newcastle         Aston Villa        TRUE            5            1
8  2023-08-13T13:00+00:00  1691931600               Gtech Community Stadium     FT            Brentford           Tottenham          NA            2            2
9  2023-08-13T15:30+00:00  1691940600                       Stamford Bridge     FT              Chelsea           Liverpool          NA            1            1
10 2023-08-14T19:00+00:00  1692039600 FT                        Old Trafford        Manchester United              Wolves        TRUE            1            0
11 2023-08-20T13:00+00:00  1692536400                            Villa Park     FT          Aston Villa             Everton        TRUE            4            0
12 2023-08-21T19:00+00:00  1692644400                        Selhurst Park     FT       Crystal Palace             Arsenal       FALSE            0            1
13 2023-08-19T14:00+00:00  1692453600                        Craven Cottage     FT               Fulham           Brentford       FALSE            0            3
14 2023-08-19T14:00+00:00  1692453600                               Anfield     FT            Liverpool         Bournemouth        TRUE            3            1
15 2023-10-03T18:30+00:00  1696357800                       Kenilworth Road     FT                Luton             Burnley       FALSE            1            2
16 2023-08-19T19:00+00:00  1692471600                        Etihad Stadium     FT      Manchester City           Newcastle        TRUE            1            0
17 2023-08-18T18:45+00:00  1692384300 FT                      The City Ground        Nottingham Forest       Sheffield Utd        TRUE            2            1
18 2023-08-19T16:30+00:00  1692462600               Tottenham Hotspur Stadium     FT            Tottenham   Manchester United        TRUE            2            0
19 2023-08-20T15:30+00:00  1692545400                         London Stadium     FT             West Ham             Chelsea        TRUE            3            1
20 2023-08-19T14:00+00:00  1692453600                        Molineux Stadium     FT               Wolves            Brighton       FALSE            1            4
21 2023-08-26T11:30+00:00  1693049400                      Vitality Stadium     FT          Bournemouth           Tottenham       FALSE            0            2
22 2023-08-26T14:00+00:00  1693058400                      Emirates Stadium     FT              Arsenal              Fulham          NA            2            2
23 2023-08-26T14:00+00:00  1693058400               Gtech Community Stadium     FT            Brentford      Crystal Palace          NA            1            1
24 2023-08-26T16:30+00:00  1693067400 The American Express Community Stadium     FT             Brighton            West Ham       FALSE            1            3
25 2023-08-27T13:00+00:00  1693141200                             Turf Moor     FT              Burnley         Aston Villa       FALSE            1            3
26 2023-08-25T19:00+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 building and analyzing football 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 scorers and making predictions of the outcomes and final standings of the 2023 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.

Functions

- **game_changers:** Pulls the top 20 game changers from the Premier League 2023 season.

- **predict_win:** Predicts the outcomes of the remaining matches of the 2023 season.

- **predict_league:** Predicts the final league standing of the 2023 season.

- **top_20:** Displays the top 20 goal scorers in an interactive tabular format.

- **compare_teams:** Create a spider plot to compare performance metrics of two teams.

- **track_performance:** Illustrates a team's performance over time with a line plot.

Thank You