

# 1 The Shiny Assignment

The objective of the Shiny assignment is to learn the use of the Shiny application with data downloaded via an API

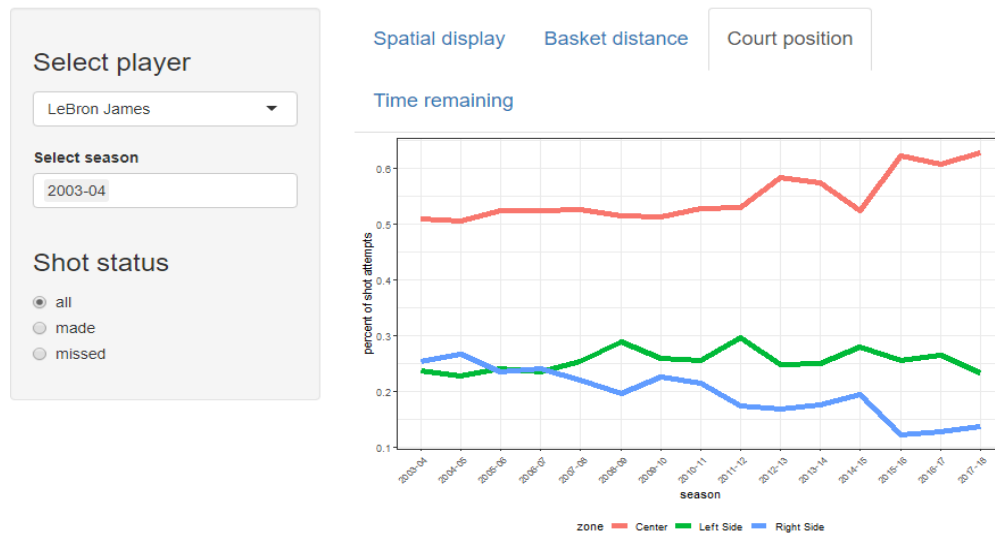
The material you have available is the following

1) A tutorial on Learning Shiny with NBA data. This tutorial available from the course website and originally written by Julia Wrobel illustrates Shiny at two levels (simplified and full).

You should go through the tutorial and learn how to change the web applications.

In particular you should be able to modify the original applications reported here

## NBA Shot Attempts



the requested modification is the following: instead of having shots taken from the center, left and right, you should have shots taken from 3P, 2P short range, and 2p points mid-range.

2) Once you have mastered the construction of the web application with Shiny you should change the data the application refers by accessing API to download data from R.

A tutorial on accessing API to download data from R is available from the course website. You should first go through that tutorial, then you should use what you have learnt to download play-by-play data from SERIE C GOLD Girone Est LOMBARDIA provided by Genius Sport.

In order to proceed with the download you should use the api key and modify the instructions contained in the file runAPI\_cf.R. The data available at Genius sport via API can be analyzed at the following

[https://developer.geniussports.com/warehouse/rest/index\\_basketball.html](https://developer.geniussports.com/warehouse/rest/index_basketball.html) ( ID of C Gold - LOMBARDIA is 25992.)

Using the try-out function

For example, "Get a list of matches by competition"

The screenshot shows the API documentation for the 'Matches' endpoint. On the left is a navigation menu with categories like Clubs, Teams, Divisions, etc., and 'Match Related' is highlighted. The main content area is titled 'Matches' and includes a description: 'A match is the actual sporting event between a number of competitors (for team sports generally 2)'. Below this is a 'get' method section with the endpoint `/basketball/competitions/{competitionId}/matches` and a 'Try it out' button highlighted with a red box. A 'Parameters' table follows, listing `competitionId`, `phaseName`, `poolNumber`, `tournamentId`, `hostingTeamId`, and `fromDate` with their respective data types and descriptions.

Parameter	Description
<code>competitionId</code> *	Unique identifier for the competition
<code>phaseName</code>	Phase/stage name for pools
<code>poolNumber</code>	Pool Number
<code>tournamentId</code>	Unique identifier of the tournament item
<code>hostingTeamId</code>	Which team is the host of the Venue
<code>fromDate</code>	Display where date is >= to this value

Try API Call

API Key: a062d44dc4d72567cbfc591ae25c

Environment: Production

competitionid\* 75997 Unique Identifier for the competition

phaseName Phase/stage name for pools

poolNumber Pool Number

tournamentId Unique identifier of the tournament item

hostingTeamId Which team is the host of the Venue

fromDate YYYY-MM-DD HH:MM:SS Display where date is >= to this value

## 1.1 THE DATA

you can get a feel for the data by looking up the website of the league

<http://fip-web.azurewebsites.net/CompetitionMatches.aspx?ID=252&rg=LO&s=G>

and by accessing specific game data by using the identifier of games (the following link will take you to game 1362614, the first game played in the league)

<http://www.fibalivestats.com/u/FIPDP/1362614/>

## 1.2 ASSIGNED TASK

Construct a Web Application capable of visualizing all the shot attempts of selected players of selected teams of SERIE C GOLD Lombardia Girone Est, the user should be able to select a team and then players within that team. The same representation of NBA shot attempts should then apply.