



My first... plot (.ly): beautiful plots with Plotly

[R blog](#)By [Nicola Sturaro Sommacal](#)

📅 December 5, 2013

Tags: [graphics](#), [My first...](#), [plot](#), [plotly](#)💬 [2 Comments](#)

[Questo articolo può essere letto anche in italiano](#)

Dear R-enthusiastic,

I discovered Plotly some days ago, and I was fascinated by it.

What is Plotly?

Plotly is a service for creating and sharing data visualizations that also offers statistical analysis tools plus a robust API, the ability to graph custom functions and a built-in Python shell. Among its APIs, there is the R one: Plotly interactive visualization can be created directly from R.

Why should I use Plotly?

With Plotly, R users can easily create a plot within R with a few lines of code and refine it with the online tool. Indeed, it took me a bit of clicking around to figure out how to do things like add a new visualization to existing data or group data by a specific factor, but many tasks were quite doable without having to read instructions or watch tutorial videos. In general, though, it did not take too much work to figure out a good portion of Plotly's capabilities.

Why should I not use Plotly?

Some tasks are less intuitive, such as embedding a visualization into an external Web site, and also some workaround I found on the net doesn't work for me. By the way, interactive plots can be embedded, like in this [Washington Post article](#).

Another drawback of Plotly concerns privacy: it is not clear if I can produce a plot, embed it on my website but not show it to the world through the Plotly website. This will be fixed soon - do not forget this is a beta version - and Plotly will assume a Github like freemium model.

My first plot

The marketing department of a company wants to know how many records of its data base refer to customers and how many to prospect customers. Customers are split into (current) customers and dormant (former) customer.

First of all, I need to install the plotly package and its dependencies.

```
1 |
2 | # Required packages from CRAN
3 | .pkgs = c("RJSONIO", "RCurl", "devtools")
4 |
5 | # Install required packages from CRAN (if not)
6 | .inst <- .pkgs %in% installed.packages()
7 | if(length(.pkgs[!.inst]) > 0) install.packages(.pkgs[!.inst])
8 |
9 | # Install plotly package from Github
10 | if(! "plotly" %in% installed.packages()) {
11 |   require(devtools)
12 |   devtools::install_github("plotly/R-api")
13 | }
14 |
15 | # Load package
16 | library(plotly)
```

At this point, I should sign up to Plotly and get an API key. Then, I connect to Plotly from R.

```
2 | py <- plotly(username = usr, key = api)
```

where `usr` and `api` are strings containing my username and API key, respectively.

Now I have to build some lists with data to be plotted and plot layout

```
1 |
2 | customer <- list(
3 |   name = 'Customer',
4 |   x = c('All Customers'),
5 |   y = c(5000),
6 |   type = 'bar',
7 |   marker = list(
8 |     color = 'rgb(9,173,66)',
9 |     line = list(color = 'grey', width = 3)
10 |  )
11 | )
12 |
13 | dormant <- list(
14 |   name = 'Dormant',
15 |   x = c('All Customers'),
16 |   y = c(3000),
17 |   type = 'bar',
18 |   marker = list(
19 |     color = 'rgb(255,165,0)',
20 |     line = list(color = 'grey', width = 3)
21 |  )
22 | )
23 |
24 | prospect <- list(
25 |   name = 'Prospect',
26 |   x = c('Prospect'),
27 |   y = c(4000),
28 |   type = 'bar',
29 |   marker = list(
30 |     color = 'rgb(255,0,0)',
31 |     line = list(color = 'grey', width = 3)
32 |  )
33 | )
34 |
35 | l <- list(
36 |   title = 'End User',
37 |   autosize = FALSE,
38 |   width = 550,
39 |   height = 550,
```

```
40 showlegend = TRUE,  
41 xaxis = list(  
42   zeroline = FALSE  
43 ),  
44 yaxis = list(  
45   type = 'category',  
46   zeroline = FALSE  
47 ),  
48 categories = categories,  
49 barmode = 'stack',  
50 bargap = 0.25,  
51 bargroupgap = 0.3,  
52 bardir = 'v'  
53 )
```

At this point, I pass all these information to Plotly.

```
1  
2 response <- py$plotly(list(customer, dormant, prospect), kwargs = list(layout=l))
```

Within my R, I can open my favorite browser to see the results.

```
1  
2 system(paste("google-chrome", response$url))
```

Blog readers can view the results below, as exported to PNG, or the [interactive version in the Plotly website](#).



[View the interactive version in the Plotly website](#)

How much time consuming is Plotly?

I needed about half an hour to learn how Plotly works and get the API, another half an hour to produce the plot and more than an hour to learn how embed and/or share the plot.

Finally, I am sure I will spend some words about Plotly on the "Programming with R" course that Quantide has organized in Milan, on January 30-31. For more information about this course, please visit the [Quantide website](#).



Related Post

Ggplot: multiple legends for the same aesthetic

Enrico is a colleague of mine in Quantide. Some days ago, he asked me how to get two different legends for several coloured lines in a ggplot graphic....

Do Presidents Have Sentiments? A speeches analysis

Today we are delighted to host a kind contribution from Salvino A. Salvaggio, PhD. In this article he turns inside out all the presidential speech...

Few steps to connect R with Excel: XLConnect!

Excel is the basic tool for any type of analysis. Often using R we have the need to communicate with Excel, for example read an excel file with...

Share: [f](#) [t](#) [p](#) [g+](#)



Nicola Sturaro Sommacal

2 Comments

Il mio primo... plot (.ly): grafici interattivi con Plotly | InsulaR

December 6, 2013 at 9:11 pm

[...] puoi leggere questo articolo anche sul sito del Milano R net in lingua inglese. Questo articolo è stato pubblicato in Blog e taggato come grafica, Il [...]

[Log in to Reply](#)



tanthiamhuat

May 21, 2015 at 7:19 am

thanks for the wonderful explanation. I follow through the code, but error as below:

Error in eval(expr, envir, enclos) : object 'categories' not found.

After comment on the categories, the code is able to run, but error as below:

Warning message:

running command 'google-chrome https://plot.ly/~tanthiamhuat/5' had status 127

[Log in to Reply](#)

Leave a Reply

You must be logged in to post a comment.

Search! type and hit enter

Sponsored by



Upcoming Events

October 2016 >

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					



R live class - R for beginners

3 October 2016 at 10:00

Quantide premises
Quantide premises - 85 Corso
Italia - 20025 Legnano - Italy

Register Now!

Powered by Eventbrite

Our free web books



Rabbit - Introduction to R

Ramarro - R for Developers

We are part of



Join the community

New user? → Join now

Close friend? → Login

R courses



Data Manipulation with R

Statistical Models with R

R for Beginners

Data Mining with R

R for Developer

Our meetings

1st MilanoR Meeting



Top Authors



MilanoR (51 Posts)



Quantide srl (15 Posts)



Nicola Sturaro Sommacal

(13 Posts)



Enrico Tonini (7 Posts)



Michele Usuelli (6 Posts)



Andrea Spanò (5 Posts)



Andrea Pedretti (4 Posts)



Marco Ghislanzoni (3

Posts)



Mec Analytics (3 Posts)



Max Marchi (3 Posts)

Tags

Agenda Algorithm

Announcements Big

Data bioR book **courses**

data.table data import data

management data

manipulation data mining

dplyr excel GenABEL ggmap ggplot

ggplot2 graphics Hadoop

MapReduce maps methods **MilanoR**

meetings models My first... Next

Courses **Past Courses Past**

Meetings plot programming

qplot quantide R blog Revolution

Analytics rmr2 RStudio rworldmap s4 sales

dashboard shiny tutorial useR useR2013

useR2015

R software

R-project

Task Views

R documentation

R-project: R manuals

Quantide: R Web Books

R community

The R Journal

R Bloggers

Sponsored by [Quantide](#) | Powered by [WordPress](#)