Interactive plots using R

Matthew Malishev[1]*

[1] *Department of Biology, Emory University, 1510 Clifton Road NE, Atlanta, GA, USA, 30322*

Contents

Date: 2018-10-02
R version: 3.5.0
*Corresponding author: matthew.malishev@gmail.com
This document can be found at https://github.com/darwinanddavis/rInteractive

Overview

Interactive plots using javascript viz, including rCharts, d3js, leaflet, Richshaw, to name a few. `rCharts` uses multiple javascript plotting libraries. Sourced from http://ramnathv.github.io/rCharts/.

Install dependencies

Set plotting function

```
require("RCurl")
script <- getURL("https://raw.githubusercontent.com/darwinanddavis/plot_it/master/plot_it.R", ssl.verif
eval(parse(text = script))

cat("plot_it( \n0 for presentation, 1 for manuscript, \nset colour for background, \nset colour palette
plot_it(0,"blue","Spectral","Greens",1,"mono") # set col function params
plot_it_gg("white") # same as above
```

`rCharts`

rCharts plot functions

```
types <- c("points","line","bar");types
```

```
[1] "points" "line"   "bar"
```

Scatterplot

```
require(rCharts)
## Example 1 Facetted Scatterplot
data <- iris
names(iris) = gsub("\\.", "", names(iris))
r1 <- rPlot(data$SepalLength~data$SepalWidth, data=data, color='Species', type='point')
# r1$show('iframesrc', cdn  = TRUE) # chart shows up on Rpubs but not in Rmd preview
```

Barplot

```
# need eval = F to fix 'opts_current' when knitting
## Example 2 Facetted Barplot
hair_eye = as.data.frame(HairEyeColor)
data <- hair_eye
with(data,rPlot(Freq ~ Hair | Eye, color = 'Eye', data = hair_eye, type = "bar"))
```

Polychart

Polychart

```
# need eval = F to fix 'opts_current' when knitting
data <- mtcars
r1 <- rPlot(aes(x=region,y=sum(sales)),mpg ~ wt | am + vs, data = data, type = "point", color = "gear")
r1
r1$print("chart1")
```

Adding javascript

```
graph_chart1.addHandler(function(type, e){
  var data = e.evtData;
  if (type === 'click'){
    return alert("You clicked on car with mpg: " + data.mpg.in[0]);
  }
})
```

MorrisJS

Interactive time series plot with Morris JS

```
# need eval = F to fix 'opts_current' when knitting
data(economics, package = "ggplot2")
econ <- transform(economics, date = as.character(date))
m1 <- mPlot(x = "date", y = c("psavert", "uempmed"), type = "Line", data = econ)
m1$set(pointSize = 0, lineWidth = 1)
m1
# m1$print("chart2")
```

NVD3

Interactive and re-usable charts using d3.js with NVD3. Follows work of Mike Bostock with 'Towards re-usable charts'.

```
data <- HairEyeColor
data <- subset(as.data.frame(data), Sex == "Male")
n1 <- with(data,nPlot(Freq ~ Hair, group = "Eye", data = data, type = "multiBarChart"))
n1
??nPlot
# n1$print("chart3")
```

xCharts

Rickshaw

Interactive time series with Rickshaw. See online example here and troubleshooting here.

```
require(slidify)
require(rCharts)
```

Troubleshooting example.

My data examples

Examples of packages using my own data

Clickme

Alternative to `rCharts` interactive plotting using `Clickme`.

Other interactive plotting libraries in `R`

- Clickme
- Rickshaw

References

- Clickme
- NVD3
- Polychart
- rCharts
- Rickshaw
- xCharts