How to Visualize Data With Highcharter

INTRODUCTION

Highcharter is a R wrapper for Highcharts javascript library and its modules. Highcharts is very mature and flexible javascript charting library and it has a great and powerful API.

The main features of this package are:

Various chart type with the same style: scatters, bubble, line, time series, heatmaps, treemap, bar charts, networks.

Chart various R object with one function. With hchart(x) you can chart: data.frames, numeric, histogram, character, density, factors, ts, mts, xts, stl, ohlc, acf, forecast, mforecast, ets, igraph, dist, dendrogram, phylo, survfit classes.

Support Highstock charts. You can create a candlestick charts in 2 lines of code. Support xts objects from the quantmod package.

Support Highmaps charts. It’s easy to create choropleths or add information in geojson format.

Piping styling.

Themes: you configure your chart in multiples ways. There are implemented themes like economist, financial times, google, 538 among others.
Plugins: motion, drag points, fontawesome, url-pattern, annotations.

Installation

```r
install.packages("highcharter")
library(highcharter)
```

Basic Example

This is a simple example using hchart function.

```r
library("highcharter")
data(diamonds, mpg, package = "ggplot2")

hchart(mpg, "scatter", hcaes(x = displ, y = hwy, group = class))
```

Learn more about using different visualization packages in the online course [R: Complete Data Visualization Solutions](#). In this course, you will learn how to:

- Work extensively with the ggplot package and its functionality
- Learn what visualizations exist for your specific use case
- And much more

The highcharts API

```r
highchart() %>%
hc_chart(type = "column") %>%
hc_title(text = "A highcharter chart") %>%
hc_xAxis(categories = 2012:2016) %>%
hc_add_series(data = c(3900, 4200, 5700, 8500, 11900),
               name = "Downloads")
```

Generic Function hchart
Among its features highcharter can chart various objects depending of its class with the generic hchart function.

hchart(diamonds$cut, colorByPoint = TRUE, name = "Cut")

**Zoom**

hchart(diamonds$price, color = "#B71C1C", name = "Price") %>%
hc_title(text = "You can zoom me")

**Forecasting**

One of the nicest class which hchart can plot is the forecast class from the forecast package.

library("forecast")

airforecast <- forecast(auto.arima(AirPassengers), level = 95)

hchart(airforecast)

**Highstock**

With highcharter you can use the highstock library which include sophisticated navigation options like a small navigator series, preset date ranges, date picker, scrolling and panning. With highcarter it’s easy make candlesticks or ohlc charts using time series data. For example data from quantmod package.

library("quantmod")

x <- getSymbols("GOOG", auto.assign = FALSE)

y %>%
hc_add_series(x) %>%
hc_add_series(y, type = "ohlc")

**Highmaps**

You can chart maps and choropleth using the highmaps module.

data(unemployment)
hcmap("countries/us/us-all-all", data = unemployment,
name = "Unemployment", value = "value", joinBy = c("hc-key",
"code"),
borderColor = "transparent") %>%
hc_colorAxis(dataClasses = color_classes(c(seq(0, 10, by = 2),
50))) %>%
hc_legend(layout = "vertical", align = "right",
floating = TRUE, valueDecimals = 0, valueSuffix = "%")

Now, let’s move on to the first set of real exercises on the highcharter package!