googleVis

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Google Vis API

https://developers.google.com/chart/interactive/docs/gallery

Basic idea

- The R function creates an HTML page
- The HTML page calls Google Charts
- The result is an interactive HTML graphic

Example

```
suppressPackageStartupMessages(library(googleVis))
M <- gvisMotionChart(Fruits, "Fruit", "Year",
                     options=list(width=600, height=400))
print(M,"chart")
```

Charts in googleVis

"gvis + ChartType"

- Motion charts: `gvisMotionChart`
- Interactive maps: `gvisGeoChart`
- Interactive tables: `gvisTable`
- Line charts: `gvisLineChart`
- Bar charts: `gvisColumnChart`
- Tree maps: `gvisTreeMap`

`http://cran.r-project.org/web/packages/googleVis/googleVis.pdf`

Plots on maps

```
G <- gvisGeoChart(Exports, locationvar="Country",
                  colorvar="Profit",options=list(width=600,
print(G,"chart")
```

Specifying a region

```
G2 <- gvisGeoChart(Exports, locationvar="Country",
                   colorvar="Profit",options=list(width=600,
print(G2,"chart")
```

Finding parameters to set under `options`

`https://developers.google.com/chart/interactive/docs/gallery/geochart`

Setting more options

```
df <- data.frame(label=c("US", "GB", "BR"), val1=c(1,3,4),
Line <- gvisLineChart(df, xvar="label", yvar=c("val1","val2
        options=list(title="Hello World", legend="bottom",
                titleTextStyle="{color:'red', fontSize:18}"
                vAxis="{gridlines:{color:'red', count:3}}",
                hAxis="{title:'My Label', titleTextStyle:{c
                series="[{color:'green', targetAxisIndex: 0
                         {color: 'blue',targetAxisIndex:1}]
                vAxes="[{title:'Value 1 (%)', format:'##,##
                                  {title:'Value 2 (\U00A3)
                curveType="function", width=500, height=300
                ))
```

https://github.com/mages/Introduction_to_googleVis/blob/gh-pages/index.Rmd

Setting more options

```
print(Line,"chart")
```

Combining multiple plots together

```
G <- gvisGeoChart(Exports, "Country", "Profit",options=list
T1 <- gvisTable(Exports,options=list(width=200, height=270)
M <- gvisMotionChart(Fruits, "Fruit", "Year", options=list(
GT <- gvisMerge(G,T1, horizontal=FALSE)
GTM <- gvisMerge(GT, M, horizontal=TRUE,tableOptions="bgcol
```

Combining multiple plots together

```
print(GTM,"chart")
```

Seeing the HTML code

```
M <- gvisMotionChart(Fruits, "Fruit", "Year", options=list(
print(M)
```

```
## <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
##   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
## <html xmlns="http://www.w3.org/1999/xhtml">
## <head>
## <title>MotionChartID14a61439df2ba</title>
## <meta http-equiv="content-type" content="text/html;chars
## <style type="text/css">
## body {
##   color: #444444;
##   font-family: Arial,Helvetica,sans-serif;
##   font-size: 75%;
##   }
##   a {
##   color: #4D87C7;
##   text-decoration: none;
```

Things you can do with Google Vis

- The visualizations can be embedded in websites with HTML code
- Dynamic visualizations can be built with Shiny, Rook, and R.rsp
- Embed them in R markdown based documents
- Set `results="asis"` in the chunk options
- Can be used with knitr and slidify

For more info

```
demo(googleVis)
```

- http://cran.r-project.org/web/packages/googleVis/vignettes/googleVis.pdf
- http://cran.r-project.org/web/packages/googleVis/googleVis.pdf
- https://developers.google.com/chart/interactive/docs/gallery
- https://developers.google.com/chart/interactive/faq