

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:{color:'red',
    series="[ {color:'green', targetAxisIndex: 0},
      {color: 'blue',targetAxisIndex:1} ]",
    vAxes="[ {title:'Value 1 (%)', format:'##,##%',
      {title:'Value 2 (\u00A3)', format:'##,##'} ],
    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="bgcoi
```

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>MotionChartID2bc6654669ee</title>  
## <meta http-equiv="content-type" content="text/html;char:  
## <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>