R Charts

Datasets

Hotdog Contest Winners

```
# A tibble: 6 x 5
   Year Winner                       Dogs_eaten Country       New_record
  <dbl> <chr>                             <dbl> <chr>              <dbl>
1  1980 Paul Siederman & Joe Baldini        9.1 United States          0
2  1981 Thomas DeBerry                     11   United States          0
3  1982 Steven Abrams                      11   United States          0
4  1983 Luis Llamas                        19.5 Mexico                 0
5  1984 Birgit Felden                       9.5 Germany                0
6  1985 Oscar Rodriguez                    11.8 United States          0
```

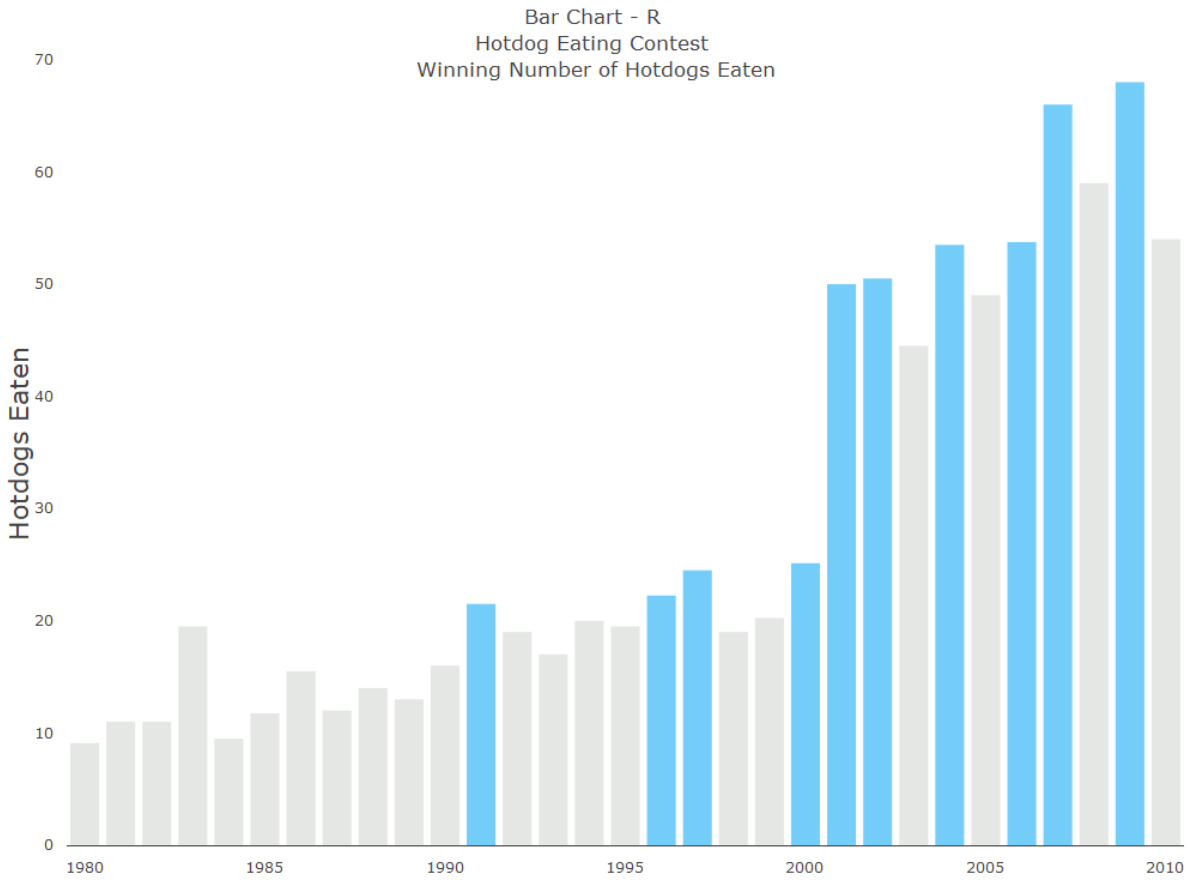
Obama Approval Ratings

```
# A tibble: 6 x 4
  Issue           Approve Disapprove  None
  <chr>             <dbl>      <dbl> <dbl>
1 Race Relations       52         38    10
2 Education            49         40    11
3 Terrorism            48         45     7
4 Energy Policy        47         42    11
5 Foreign Affairs      44         48     8
6 Environment          43         51     6
```

Charts

1. Bar Chart

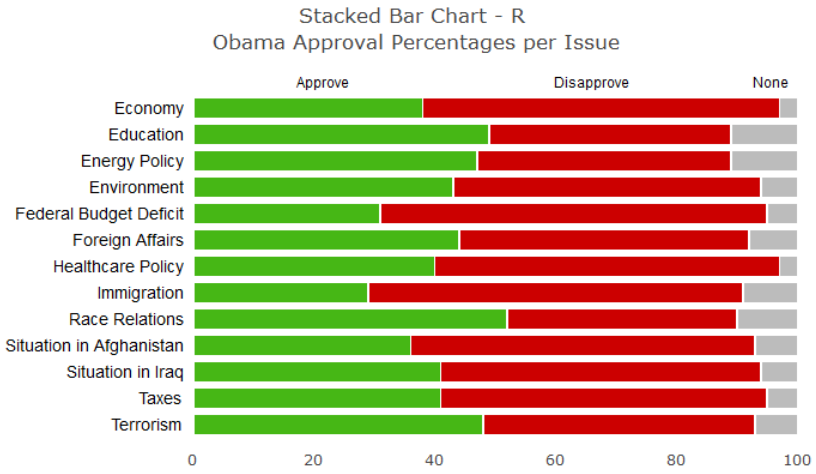
```
# Highlight record years with color
fill_colors <- c()

for ( i in 1:length(hotdog_winners_df$New_record) ) {
    if (hotdog_winners_df$New_record[i] == 1) {
        fill_colors <- c(fill_colors, "#74cdf9")
    } else {
        fill_colors <- c(fill_colors, "#e5e7e4")
    }
}

fig <- plot_ly(hotdog_winners_df, x = ~Year, y = ~Dogs_eaten, type = 'bar',
        marker = list(color = fill_colors, hoverinfo = 'none'))

fig <- fig %>%
    layout(
        title = "Bar Chart - R \nHotdog Eating Contest \nWinning Number of Hotdogs Eaten",
        xaxis = list(showgrid = FALSE,
                     title = ""),
        yaxis = list(showgrid = FALSE,
                     title = "Hotdogs Eaten",
                     titlefont = list(size = 22)),
        margin = list(l = 5, r = 5, b = 10, t = 30, pad = 10)
    )

export(fig, file = "images/barchart-r.png")
```



2. Stacked Bar Chart

```
names <-  obama_df$Issue

top_labels <- c('Approve', 'Disapprove', 'None')

fig <- plot_ly(obama_df, x = ~Approve, y = ~names, type = 'bar',
               orientation = 'h', marker = list(color = '#46b715',
                                                line = list(color = '#ffffff',
                                                            width = 1.5)))
fig <- fig %>% add_trace(x = ~Disapprove, marker = list(color = '#cc0000'))
fig <- fig %>% add_trace(x = ~None, marker = list(color = '#bcbcbc'))

fig <- fig %>%
    layout(xaxis = list(title = "",
```

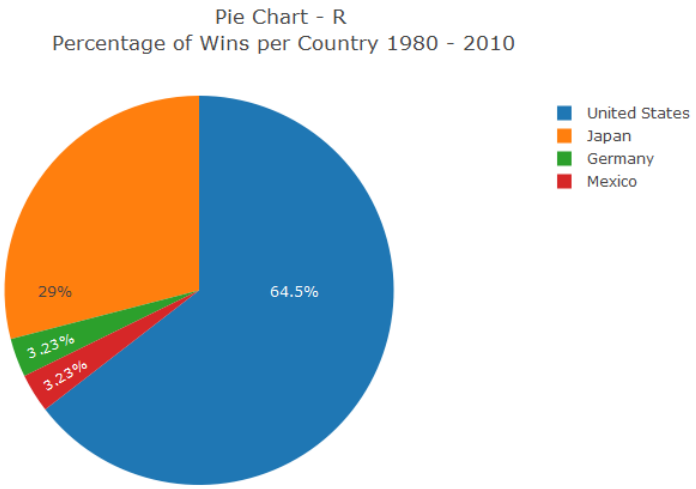
```
                showgrid = FALSE,
                showline = FALSE,
                showticklabels = TRUE,
                zeroline = FALSE,
                domain = c(0.15, 1)),
    yaxis = list(title = "",
                showgrid = FALSE,
                showline = FALSE,
                showticklabels = FALSE,
                zeroline = FALSE,
                categoryorder = 'category descending'),
    barmode = 'stack',
    showlegend = FALSE,
    title = "Stacked Bar Chart - R \nObama Approval Percentages per Issue",
    autosize = F,
    margin = list(l = 70, r = 5, b = 5, t = 120, pad = 10)
    )

# labeling the y-axis
fig <- fig %>%
    add_annotations(xref = 'paper',
                    yref = names, x = 0.14,
                    y = names,
                    xanchor = 'right',
                    text = names,
                    font = list(family = 'Arial', size = 14,
                                color = '#000000'),
                    showarrow = FALSE, align = 'right')

# label top titles
fig <- fig %>%
    add_annotations(xref = 'x', yref = 'paper',
                    x = c(43 / 2, 45 + 42 / 2, 43 + 42 + 21 / 2),
                    y = 1.07,
                    text = top_labels,
                    font = list(family = 'Arial', size = 12,
                                color = '#000000'),
                    showarrow = FALSE)

export(fig, file = "images/stackedbarchart-r.png")
```



2. Pie Chart

```
# Get the counts for each country
countries = dplyr::count(hotdog_winners_df, Country, sort = FALSE)

# plot pie chart
fig <- plot_ly(countries, labels = ~Country, values = ~n, type = 'pie',
               textinfo = 'percent', insidetextorientation = 'radial')

fig <- fig %>%
    layout(title = 'Pie Chart - R \n Percentage of Wins per Country 1980 - 2010',
        xaxis = list(showgrid = FALSE,
                  zeroline = FALSE,
                  showticklabels = FALSE),
        yaxis = list(showgrid = FALSE,
```

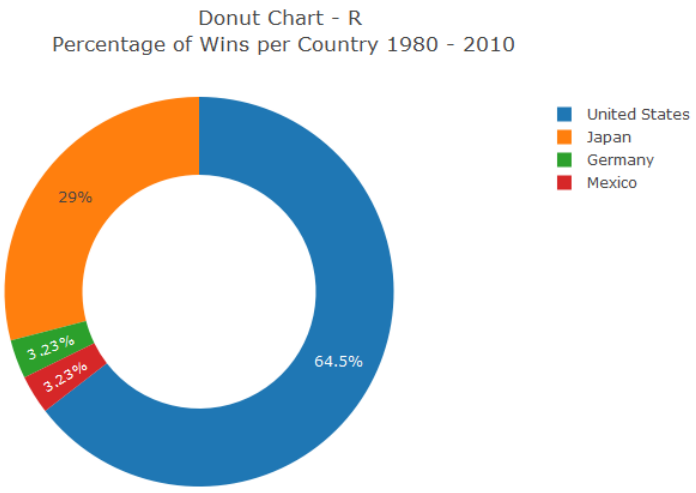
```
                    zeroline = FALSE,
                    showticklabels = FALSE),
         autosize = F,
         margin = list(l = 5, r = 5, b = 5, t = 120, pad = 10)
     )

export(fig, "images/piechart-r.png")
```



4. Donut Chart

```
# Get the counts for each country
countries = dplyr::count(hotdog_winners_df, Country, sort = FALSE)

# plot pie chart
```

```r
fig <- plot_ly(countries, labels = ~Country, values = ~n)

fig <- fig %>%
    add_pie(hole = 0.6)

fig <- fig %>%
    layout(title = 'Donut Chart - R \n Percentage of Wins per Country 1980 - 2010',
        xaxis = list(showgrid = FALSE,
                     zeroline = FALSE,
                     showticklabels = FALSE),
        yaxis = list(showgrid = FALSE,
                     zeroline = FALSE,
                     showticklabels = FALSE),
        autosize = F,
        margin = list(l = 5, r = 5, b = 5, t = 120, pad = 10)
    )

export(fig, "images/donutchart-r.png")
```


Donut Chart - R
Percentage of Wins per Country 1980 - 2010
United States
Japan
Germany
Mexico
29%
64.5%
3.23%
3.23%