

IFLA Pre-conference 2017: Library and Research Services for Parliaments

Training Workshop:

CREATING INTERACTIVE DATA VISUALISATIONS

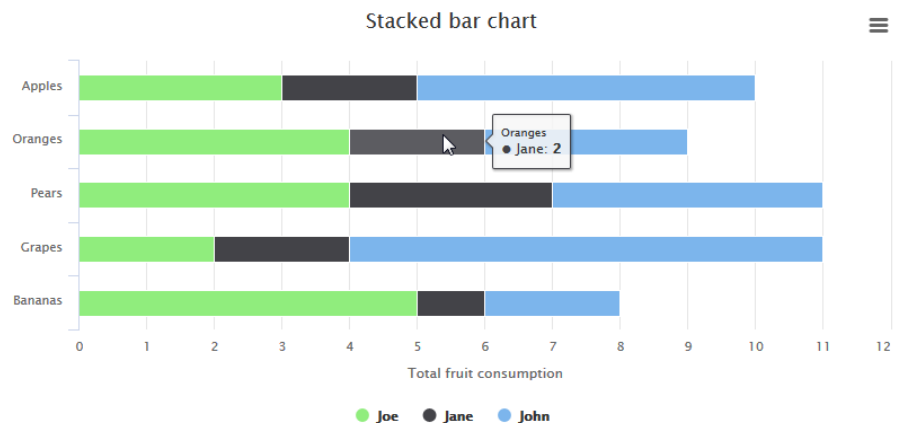
Supporting Material

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– HIGHCHARTS

Highcharts is a charting library written in pure JavaScript, offering an easy way of adding interactive charts to your web site or web application.



HighCharts Editor

The Highcharts Editor is a JavaScript/CSS library for Highcharts 5 which enables non-programmers to easily create and publish charts. It's implemented as a simple and clean wizard-style UI which walks the user through chart creation from start to finish. Features can be enabled/disabled as desired and required, and augmenting it with e.g. custom importing modules is a straight-forward process.

To download the editor, follow these steps:

1. Go to: <https://www.highcharts.com/products/highcharts-editor>
2. Click on "download"
3. Scroll down to "Downloads" section
4. Depending on your operating system, click on one of the "highcharts-editor-0.1.3-xxxxx-.zip files. (darwin = iOS; linux = linux; win32 = Windows)
5. Save file _ Extract Zip
6. To launch the editor, click on "highcharts-editor.exe"



HighCharts Demo: <https://www.highcharts.com/demo>

```
1 Highcharts.chart('container', {
2   chart: {
3     type: 'spline'
4   },
5   title: {
6     text: 'Monthly Average Temperature'
7   },
8   subtitle: {
9     text: 'Source: WorldClimate.com'
10  },
11  xAxis: {
12    categories: ['Jan', 'Feb', 'Mar', 'Apr', 'May', 'Jun',
13               'Jul', 'Aug', 'Sep', 'Oct', 'Nov', 'Dec']
14  },
15  yAxis: {
16    title: {
17      text: 'Temperature'
18    },
19    labels: {
20      formatter: function () {
21        return this.value + '°';
22      }
23    }
24  },
25 }
```

Under “Demo”, HighCharts offer a comprehensive library of charts that can be further customized using the JSFiddle. All charts are already with sample data and all corresponding interactivity.

Once inside the Demo menu, select the relevant chart type. Then click on “Edit in JSFiddle”. You can customize the chart by editing the code in the JavaScript window.

Editing requires a basic understanding of JS language, however, the sample data inside the JavaScript window makes it easier to tweak the data.

All changes will immediately show in the Result window. You can save your work for future on the JSFiddle website.

HighCharts Options: <http://api.highcharts.com/highcharts>

This option is accessible via the menu “Docs _ HighCharts API Reference” that you can add to your JavaScript file (for example via JSFiddle).

The pages outline the chart configuration options, and the methods and properties of Highcharts objects.

You can search or browse inside the list of all the functions that can be used inside the HighCharts.

Some JavaScript knowledge is needed to code the functions correctly.

CONFIGURATION OPTIONS

For initial declarative chart setup. View as [JSON](#).

```
Highcharts.setOptions({
  ▶ global: { ... }
  ▶ lang: { ... }
});
Highcharts.chart('container', {
  ▶ accessibility: { ... }
  ▶ chart: { ... }
  ▶ colors: [ ... ]
  ▶ credits: { ... }
  ▶ data: { ... }
  ▶ defs: { ... }
  ▶ drilldown: { ... }
  ▶ exporting: { ... }
  ▶ labels: { ... }
  ▶ legend: { ... }
```

– ONLINE LIBRARIES

The Data Visualisation Catalogue: <http://www.datavizcatalogue.com/>

The Data Visualisation Catalogue is a library of different information visualisation types. It allows users to search for already implemented interactive charts based on the chart type or desired function of the graph. Once the graph is found, the website offers an extensive amount of links to sources where such graph can be created online.

Search by Function



View by List

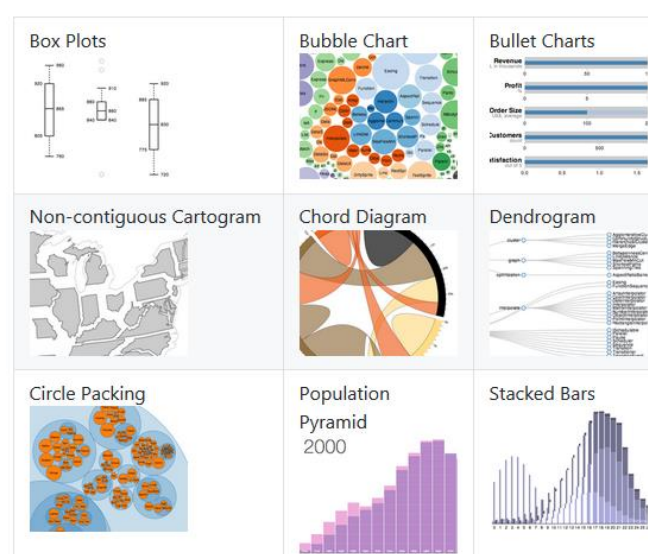
What do you want to show?



D3: <https://d3js.org/>

D3.js is a JavaScript library for manipulating documents based on data. D3 helps you bring data to life using HTML, SVG, and CSS. D3's emphasis on web standards gives you the full capabilities of modern browsers without tying yourself to a proprietary framework, combining powerful visualization components and a data-driven approach to DOM manipulation. A rather advanced knowledge of IT development is needed.

Visual Index



Google Charts: <https://developers.google.com/chart/>

Google Charts offer a very similar approach to coding via the JSFiddle as HighCharts. Google Charts are completely free and offer an extensive library of already predefined charts, which you can further customize. Each type of chart comes with an extensive explanation on how to change some major variables such as data, colours, labels, axis, etc. They also allow for easy connection to [data sources](#), such as Google Spreadsheets or Google Fusion Tables.

Overview

Hello, Charts!

Quickstart

Load the Charts Library

Prepare the Data

Customize the Chart

Draw the Chart

Draw Multiple Charts

Chart Types

Chart Gallery

Annotation Charts

Area Charts

Bar Charts

Bubble Charts

Calendar Charts

Candlestick Charts

Column Charts

Combo Charts

Diff Charts

Donut Charts

Gantt Charts

Gauge Charts

GeoCharts

Histograms

Intervals

Line Charts

Maps

Org Charts

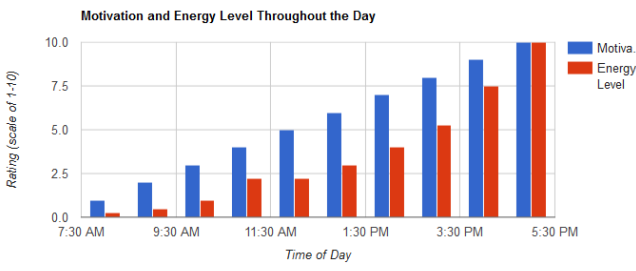
Visualization: Column Chart ☆☆☆☆

Overview

A *column chart* is a vertical bar chart rendered in the browser using *SVG* or *VML*, whichever is appropriate for the user's browser. Like all Google charts, column charts display tooltips when the user hovers over the data. For a horizontal version of this chart, see the [bar chart](#).

Examples

Basic column chart with multiple series



Time of Day	Motivation (Rating)	Energy Level (Rating)
7:30 AM	1.0	0.5
9:30 AM	2.5	1.0
11:30 AM	4.0	2.0
1:30 PM	5.5	3.0
3:30 PM	7.0	4.5
5:30 PM	8.5	6.0

[CODE IT YOURSELF ON JSFIDDLE](#)

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