COMP6234: Tutorial 1 – Google Charts

# Introduction

This tutorial will introduce you to using Google Charts for creating visualisations. Google Charts allow simple visualisations to be made for use on webpages using a number of ready-to-use chart templates.

To make charts, you generally just need a mix of HTML and Javascript. If you’re not familiar with these, don’t worry too much – the tutorials walk you through everything. I would recommend spending a couple of hours to gain some background knowledge about them as you progress through the Data Visualisation course, however, as many visualisations these days are aimed at the Web and therefore make use of Web technologies such as these.

Google Charts are cross-platform compatible, meaning they can easily be displayed on any device. You don’t need to worry about adapting them for mobile or installing any software. Generally any Web Browser will work.

Each type of chart uses a ‘Data Table’, which is the same for all charts. This means you can quickly and easily switch the data between different chart types to experiment and find the best solution to your particular question.

Do explore the features of Google Charts once you’re finished with the steps in the guides below. This session is a chance for you to explore and discover what can be done, what is good, and what is bad about the service. Each set of steps won’t take up all the time in this session: you are free to experiment and play around to see what you can create.

# Tutorial: Pathway 1

If your unfamiliar with Google Charts, or have very little knowledge of Web Technologies such as HTML and Javascript, I would advise the Quick Start, covering all the basics: <https://developers.google.com/chart/interactive/docs/>

Note: It is important to read each step and understand what all the code is doing, rather than just copying and pasting and then looking at the result. If there are bits you don’t understand, take the time to find out.

When you’re finished, either try out some of the other types of chart, or have a go at Pathway 2 using live data from a Google Spreadsheet.

# Tutorial: Pathway 2

If you’ve used Google Charts before, or are pretty comfortable with JavaScript give the Quick Start a quick glance to refresh your knowledge, and then head to <https://developers.google.com/chart/interactive/docs/spreadsheets> to try out creating a Chart using live data from Google Spreadsheets.

You will need to make a sample spreadsheet to contain some data. You can search for data online, or simply make up some (e.g. people’s heights, age or eye colour – as an extra step, think about which of the chart types available are most suitable for your chosen data). Importing data from these spreadsheets is powerful – remember every time that sheet is updated, the visualisation will update to show the ‘live’ data. Google Forms – an online option for running surveys, automatically output their data into a Google Spreadsheet. So you can set up some charts to act as a live dashboard or monitoring service as your survey responses begin to come in!

\*\*Hint: you may want to take this draft survey: <https://docs.google.com/forms/d/15JCELxP1YvmKMdziSoILem4mpijkbCM6_WIYW0sshmQ/viewform> and then use the results spreadsheet at https://docs.google.com/spreadsheets/d/1wW9q2XB0k4YxyXywyIQfX7REB3hgmIm2sOhS8RYsjbc/edit#gid=204091731 to pull in some data. The responses sheet might show some summary charts, can you make a webpage containing a dashboard that displays this data differently? \*\*

Once you've experimented with pulling in live data, continue playing around with different types of charts. Trying using the same data for a few chart types and seeing where you think certain charts perform better than others.

# Critique

Throughout the tutorial, consider what you think is good – and bad – about Google Charts. Remember that with High-level tools such as this, you’re sacrificing some flexibility and power for ease of use for quickly putting things together.

* What is particularly useful?
* Is there enough flexibility?
* What are the advantages over just creating the charts in Microsoft Excel, for example?