Maps4stats

About

Maps4stats web based application which gives a visualisation of all the geographical data available from the Central Statistics Office In Ireland. A list list is displayed in the left hand side of the web page which allows the user to to select a map to display.

The application is available on.
maps4stats.appspot.com
The source is avalible on.
github.com/davem8/maps4stats

The application will display the data by which ever geographical is available in the data set such as county, province, NUTS3 (Nomenclature of Territorial Units for Statistics). Garda region and district. Some geographical areas were left out such as Electoral Division and individual towns because when the fine detail was applied over the whole of Ireland the application became very slow.

Each new map that the user selects is displayed at the top of the page and the older maps move to the bottom.

The application can also display some of the data in a bar or line chart this is useful if data is available for many years the bar chart work best for sets with less than 20 years. Some data sets such as the agriculture price gives data for each month the line chart is more suited to data sets with more than 20 time periods.

This application will benefit the people of Ireland by making the data more accessible by allowing any one to find relevant data and easily create graphs which can then be compared to other data. This tool could one day be used by newspapers, government departments, and private enterprise to gain a better understanding of Ireland.

The application makes use of the Central Statistics Offices web API. All the data sets are available in json-stat format this is a light weight open format which makes it easy to access the data.

maps4stats was created using Javascript, D3.js is used to create the graphs. Some python code was used to create the necessary meta data to display the menus and drop-down lists. The source code is available from github.com/davem8/maps4stats.

The maps were created by converting the osi shape-files from the

2011 Census to topo-json, a json based map format which is light weight and allows a lot of the fine details to be removed. This simple json format loads quickly and should work in any modern web browser.

This application was created a using Firefox and tested with Chrome unfortunately it was not possible to test on all browsers configurations. The application should work with modern browsers but there may be problems with old versions of Internet Explorer.

This application was created by one person part time over about 6 weeks so It is still very beta. I intend to keep working on it for fun. Now that the dead line of the apps4gaps has passed I can take time to re-design. I will write a back end in python using powerful statistical methods and fast numpy based scipy. This application will run nicely on google app engine.

I entered this competition because I have for along time enjoyed making graphs with the central statistics offices data but my work flow is slowed down by having to go to the website select the data set and data to download, then load the data into R or python. This was a very slow inefficient repl (Read Eval Print Loop).

My hope is to one day have an application that the user can search for and select any data. This dataset will then be displayed in a sensible format with time-series as a line chart geographically data on a map and pie and bar charts. It is difficult to create a program which will make nice graphs for any dataset without user input, for this I think using an Intelligence agent showing it good graphs it could learn to create graphs but this is a problem for another day.

I really liked working with the json-stat api it took me a couple of weeks to get into the format but once I got used to its methods of accessing the data I found it to be efficient and easy to access the data in javascript. The library for python are not as advanced I intended to improve on the python toolkit as part of the creation of a better back-end.

User Guide

Use the left side menu to choose a category and then click on a link to display a map the dropdown boxes at the top of the screen can be used to change the values of the data to be displayed. You can choose the year to display, the Statistic and the other features in the data set.

The application can also draw line and bar charts if the selected data set dose not have year data the charts may not display and if there is only one year in the set such as for the Census data the bar chart will only show one big square which may be confusing.

The select box at the very top of the page can be used to change into any dataset avalible for the cso.