

We downloaded the data of from the website, the original form is a Excel files. We developed a sample python program, using python to read the data form the Excel. Each Chinese province is set as a dictionary, it contains the population density data of every city in the province. The key in dictionary is city name, and the value is the population density. We called “the subordinate dictionary by province” Then we made another dictionary, the key is every province’s name and the value is the “the subordinate dictionary by province”. we called the superior dictionary. we use python “`json.dump()`” function to export the superior dictionary as a json file.

Visualization part:

First we need to Import `Echarts.min.js` and `jquery-3.1.1.min.js`

Then We download all the counties map from the E-chart.

(<http://echarts.baidu.com/download-map.html>)

After we get the json files for each county. We use E-chart(`echarts.registerMap`) function to show all the json map in the left html. At the same time we will read all the counties population density data from the `Eng-Density.json` file.

Then we add function `click()`. When user click the counties in the map. It will find the all the city json map in that counties and show them in the right part of html.

Then we use `getJSON('Eng-Density.json')` to load all the cities data to the counties map. And then we add tooltip to show the data .

As so far, when you put the mouse on the map it can show the name of the counties and the population density.

To make it look more clear, We use(`visualMap` tools) to add color bars besides the map. If you click the counties or the cities. It can show the data on the bar. When you drag the tag besides the bar, It will highlight the counties or city that is near that population.

Finally, we use the html and css to arrange page layout.