HDI Visualization

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ABSTRACT

Human Development Index (HDI) is used for assessing the development of a country, which can be useful for comparing national policy choices between two countries. In the past several decades, the HDI is calculated for each country to show how much the country has been developed. There are many HDI data available on the United Nations Development Programme (UNDP), which shows the values of the HDI and its components of each single country, but it does not represent other information such as the relationship between a country location and its HDI, and correlation between *mean years of schooling* and *expected year of schooling* (both are components in the HDI). In this project, we implement a tool that can visualize not only the HDI information for each country along with the country's location but also a parallel coordinate plot to show the relationship between HDI and its components for all the country. Moreover, we can see how much countries develop over the past several years. With the tool, we can observe interesting findings. For example, the countries located in the lower part of the earth tends to have low expected years of schooling.

Index Terms: Scientific visualization; Human Development Index; Country map; Parallel coordinates;

1 INTRODUCTION

Introduction paragraph

Introduce the problem and our objective

2 RELATED WORK

Talk about the existing HDI visualization and what we are going to do differently

3 DATA SOURCE

4 IMPLEMENTATION

We implement our tool in JavaScript because we want our tool to be a web-based application, which can be easy to accessed. JavaScript also has a library called D3.js that is used for producing data visualization in web browsers. Our tool can be run on a web browser. We use the built-in HTTP server , `SimpleHTTPServer`, to test and run our tool. Next we describe UI components and other tools we use in order to implement our web-based application.

4.1 UI Components

Our tool consists of multiple UI components as follows:

- **World Map**: we use the geojson data [1], which contains information for each country, such as country polygon coordinates to draw the world map and ISO ALPHA-3 code.
- **Parallel Coordinate Plot:**
- **Country Infomation:**
- **Controller:**
- **Country Selector:**

4.2 Tools

To created the preceding UI components, we mainly use HTML `<div>` tag with some CSS script to customize the UI components and the charts. For drawing charts and maps, we use D3.js, which provides several APIs.

5 VISUALIZATION RESULT

Show some picture and discussion about the result

6 CONCLUSION

REFERENCES

[1] Data Packaged Core Datasets. Data Packaged Core Datasets, 2017.

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