Milestone 2: Project Goal

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Introduction

The main objective in our project is to visualize five personality scores on a world map. We would like to compare results of the responses from various participants from various countries. In the dataset, we have demographic information about the participants such as age and gender. In our visualization, we would like to add widgets to filter out the personality scores based on the personality trait, gender, and age interval selected.

Sketches of the visualization

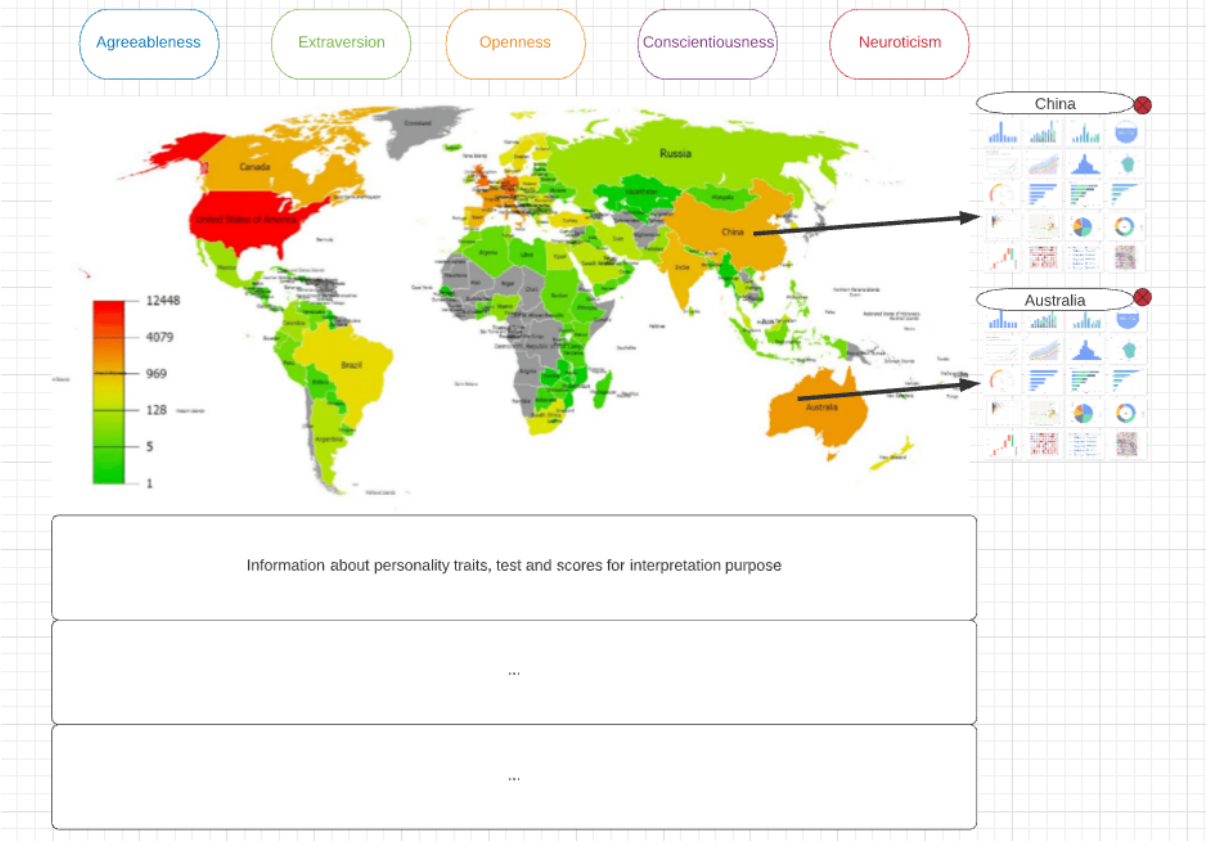

Figure 1: A broad view from the website that we would like to design

First of all, in our design, the user selects one of the five personality scores on top. Then the user can click on a particular country, and descriptive plots about that country will pop up. The user will be able to close those plots by clicking on the “X” button. He will also be able to drag them around with the mouse cursor. On top of that, there will be brushes that the user can filter out the data which they do not want to view in the plots.

Tools

- D3.js: This is the main library that we will use in our project. We will fetch the information from the dataset, and we will process it to create the appropriate logic for the purpose of representation on the world map. We will also create histograms of the distribution of personality scores when a country is clicked on using this library.

- D3-legend.js: We will be using this library to add legends in our plots since the native D3.js library does not provide any helper function for that.
- topoJSON: This library provides efficient geometries to draw the world map.

Lectures

The lectures on design, maps and interactive D3 will be especially useful for our project. Of course, the lectures in the first three weeks will be also handy since we will be writing HTML, CSS and JavaScript codes in our project frequently.

Independent pieces to implement

- The world map visualization
- Plots that are displayed upon clicking on a country (histogram of the score of participants)
- Dropdown menu to choose the desired personality trait for the purpose of visualization
- Brushes to filter by age, minimum number of respondents by country/region, and a button to choose between male, female or both
- Information section about different personality traits with appropriate pictures

Minimal viable product

On the top of the screen, we want to use a selection (either list or HTML select) to switch between different personality traits. When the selection is changed, the corresponding visualizations will also change on the map. Below selection, there will be a world map. Each country will be colored according to the average of the corresponding personality score. If the color of the country is not gray, that is, there are more participants than a threshold t that we will define, the user will be able to investigate the responses for that country in particular. A new histogram will pop up for that country and the user will be able to filter the responses with appropriate widgets. Below the world map, there will be useful information, represented in a styleful way, about the personality traits (agreeableness, extraversion, openness, conscientiousness, and neuroticism).

Extra ideas (more creative & challenging)

As an extra challenge, we would like to add a questionnaire for the user who visits our website. We will ask various questions to calculate the appropriate scores for their personality traits. Then we would like to show them which country they most closely belong to by comparing their scores with the average scores of people living in all the countries.

Functional project prototype

https://com-480-data-visualization.github.io/data-visualization-project-2021-slackers/map/index.html