# Lab 6: Political Science Exploratory Data Analysis

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#### 1 Presentation

During the lab session next Friday, 20 th of October your group will give a short (5-10 minute) presentation on the first two steps described above. Specifically, your presentation should discuss the data set you have selected and the types of questions you generated with the justification for each.

## 2 Analysis and Solution Generation

1. Your Political Science Data Analysis: In addition to the R code that provides your solutions, you are to write a report that includes the following:

#### 3 Part A

(a) A brief explanation of the data and its headers. Remember to review the articles Research Methods and Results sections.

The columns that are in the data are simple the first one is the name of all of the states from the United States. The second column has the state number which is not really necessary in my opinion it is somewhat like a counter. GSP Gross state product, which pretty much a measure of the state output. The next column that we have is the population, The reason we have this is to what is the population within the people. Also note that the population size is the same for every state in terms of year because does not get updated during that time frame. The population might in the sense that it is correlated to ideology, so For example the government ideology might be a little more liberal but nearly half of the population might Conservative. In California for Example, it is very liberal but they still have a fair share of conservatives. We also a columns on the citizen Ideology, which usually similar to the government ideology.

## 4 Part B

- (b) Five (5) questions about your data set. Also, justify your selection of these particular questions (how asking these questions maybe helpful).
  - 1. Which states have the largest discrepancy between government and citizen ideologies?
  - 2. Which states have had the largest shift between government and citizen ideologies?
  - 3. What is the correlation between poverty rates and government ideologies?
  - 4. If there is a correlation, does it differ if citizen ideologies are used instead?

#### 5 Part C

(c) The answers to your five questions including any appropriate transformations and visualizations that were produced during research.

As you can see in the graphs

#### 6 Part D

(d) Your final analysis including your input on modifying your original questions and generating new questions if relevant.

#### 7 Dr. Harward

(a) Based on Dr. Harwards provided data and article, discuss the processes to make political decisions to fund states legal services. In addition, discuss how such decisions are affected. Reflect on potential faults in this system (as you understand them) and how data analysis may be able to identify such faults.