Final Project

Examine Demographic and Socio-Economic Profiles of the US Population in a Spatial Context and as they relate to the 2016 Presidential Elections.

In the final project we will take a look at the demographic and socio-economic population profile in the US (by county), as it relates to the 2016 Presidential Elections. We will use data from the US Census Bureau (census.gov), and each group can pick any two states as its study area. States do not need to be adjacent. Each group will examine at least 10-12 variables (indicators).

What will we learn through this project?

- Work with socio-demographic and secondary data that are not inherently geospatial and that do not explicitly represent the physical environment.

- Create a Geospatial Data Library of 10-12 variables, by collecting, evaluating, and standardizing publicly available data that are not in a geospatial format.

- Use spatial analysis methods to be able to summarize Geospatial Data into meaningful information expressed analytically and cartographically in a manner that is easily understood by broad audiences.

How will we reach these learning goals?

This project is wide open. You have no constraints on what and how to use the data, as long as the final goal is to shed light into patterns that are not easily seen in the noise of too much (and not geographic) data. As a group, you can decide to be a strategist for one of the presidential candidates, you can decide to be a general observer who is trying to predict election outcomes, or you can analyze election results from states that have already held primaries, and so on.

In whatever capacity you will position your outlook, you should come up with two or three research questions at the start of your project before setting out to find answers via data and spatial analysis. Research questions could for example be shaped to discover if there is a relation between election outcomes and variables such as poverty, wealth, education attainment, age, or incarceration rates, etc.

Once you have decided what you want to examine, your first step is to find the corresponding data, and then to create the Geospatial Data Library for the project.

Preparing the Geospatial Data Library

In this project we will use Measures and Indicators. Out of many available indicators, you will pick the ones that relate to your research questions. You will download the data, summarized by county from **census.gov** (or other sources if you want) in an Excel format,

you will then convert it to GIS, and if needed you will clean and standardize it per the needs of your project. I have prepared a step-by-step guide for going from an Excel to a Shapefile with a world countries example.

Example of your Geospatial Data Library

Measure – Quality of Life (2 indicators)
- Life expectancy
- Infant mortality

Measure – Education Attainment (2 indicators)
- Percent of people with graduate degrees
- Percent of people with high school diploma

Measure – Economic Conditions (6 indicators)
- Poverty
- Wealth
- Income
- Networth
- Unemployment
- Incarceration

When your Geospatial Data Library is ready, and you have taken care to document the definitions for each of your variables, you can then start the analysis process and develop your method. You can consolidate your method with one state first, and then apply it to the other state. As part of your method, at the end you can also create state profiles of composite indexes (weighted if you want) from these measures and indicators (for example you can make up a composite index of progress by combining education, economic conditions, etc.).