Ira A. Fulton Schools of Engineering
Arizona State University

CSE 578: Data Visualization

Programming Assignment 5 - Geographic Data Analysis

Assignment Description

In this assignment, you will be using a database of geographic data provided for you in the PySal library to create two plots: a choropleth map and a proportional symbol map.

In addition to these two plots, you will compute the value of Moran's I for this data.

Directions

The data for this assignment includes the United States' lower 48 states. In addition to the state-by-state data, the dataset contains shape files for each state that you can use to create the choropleth and proportional symbol maps.

Using the data provided, perform the required analyses and create the requested maps.

Technical Requirements

If you choose to work on your assignment locally, you can use the following versions:

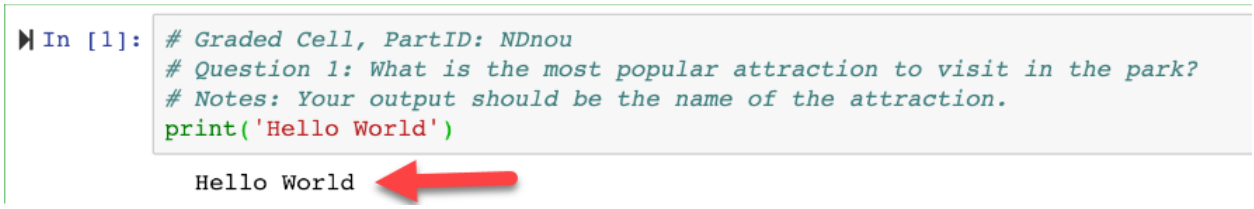
- Python 3.6
- Sqlite3
- Pandas == 0.23.3
- Matplotlib == 2.2.2
- Numpy == 1.13.3
- Pysal == 1.14.4

Submission Directions for Assignment Deliverables

This assignment will be auto-graded. We recommend that you use Jupyter Notebook in your browser to complete and submit this assignment. In order for your answers to be correctly registered in the system, you must place the code for your answers in the cell indicated for each question. In addition, you should submit the assignment in the cell's display area. The display area should contain only your answer with no extraneous information, or else the answer may not be picked up correctly.

Each cell that is going to be graded has a set of comment lines at the beginning of the cell. These lines are extremely important and must not be modified or removed. (Graded Cell and PartID comments must be in the same line for proper execution of code.)

Please execute each cell in Jupyter Notebook before submitting.



Evaluation

There are three parts in the grading, and each part has one test case where the total number of points for all parts is 30. If some part of your data is incorrect, you will get a score of 0.0. If the submission fails, we will return the corresponding error messages. If the submission is correct, you will see "Correct" with 10 points for each part.