Title: Hot Spot Analysis and Visualization

Critical Resources: an internet connected computer, ArcMap (available in 70-2670), Hot Spot Analysis and Visualization datasets.

Purpose:

The purpose of this lab will be for you gain experience and knowledge with Hot Spot Analysis and Visualization.

Learning Objectives – After completing the lab, you will know:

- how to form a hypothesis about a spatial problem
- testing the hypothesis using a spatial statistic
- visualizing results of your hot spot analysis
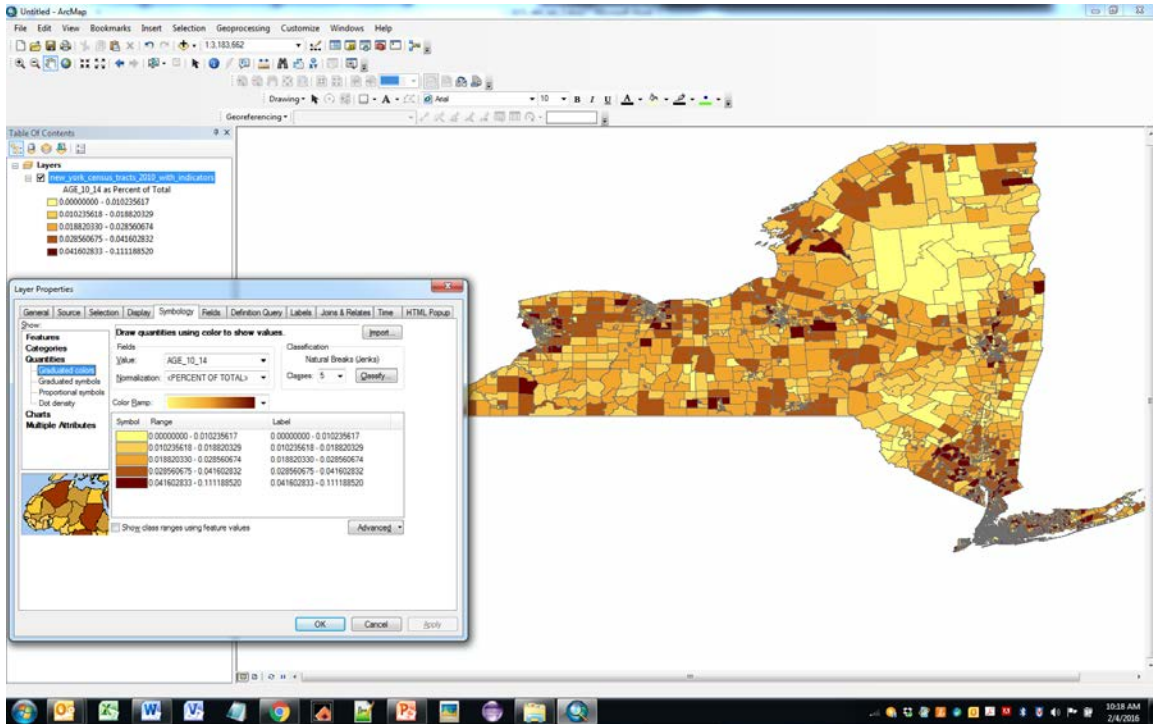
Deliverables:

A write-up of your response to the instruction questions.

Instructions:

1. Open the Hot Spot Analysis and Visualization datasets in ArcMap, these are census tracts for New York State

2. Examine the attributes of the dataset to find variables that might be of interest to you. For example, vacant houses or owner occupied houses.


3. Create a normalized choropleth map of the variable you are interested in to start formulating your hypothesis. For example, the image below shows age groups 10 to 14 in a 5 class natural breaks normalized as percent of total

Add a screen shot of your map to your final deliverable and your initial thoughts on patterns you are seeing. Describe how those patterns lead you to a hypothesis.
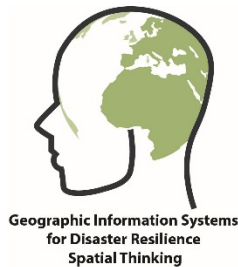
4. Write down a hypothesis you wish to investigate. Run the Getis-Ord Gi* statistic on the dataset (ArcToolbox > Spatial Statistics Tools > Mapping Clusters > Hot Spot Analysis (Getis-Ord Gi*)

Place a screen of your Getis-Ord Gi* output in you final deliverable (see example below).
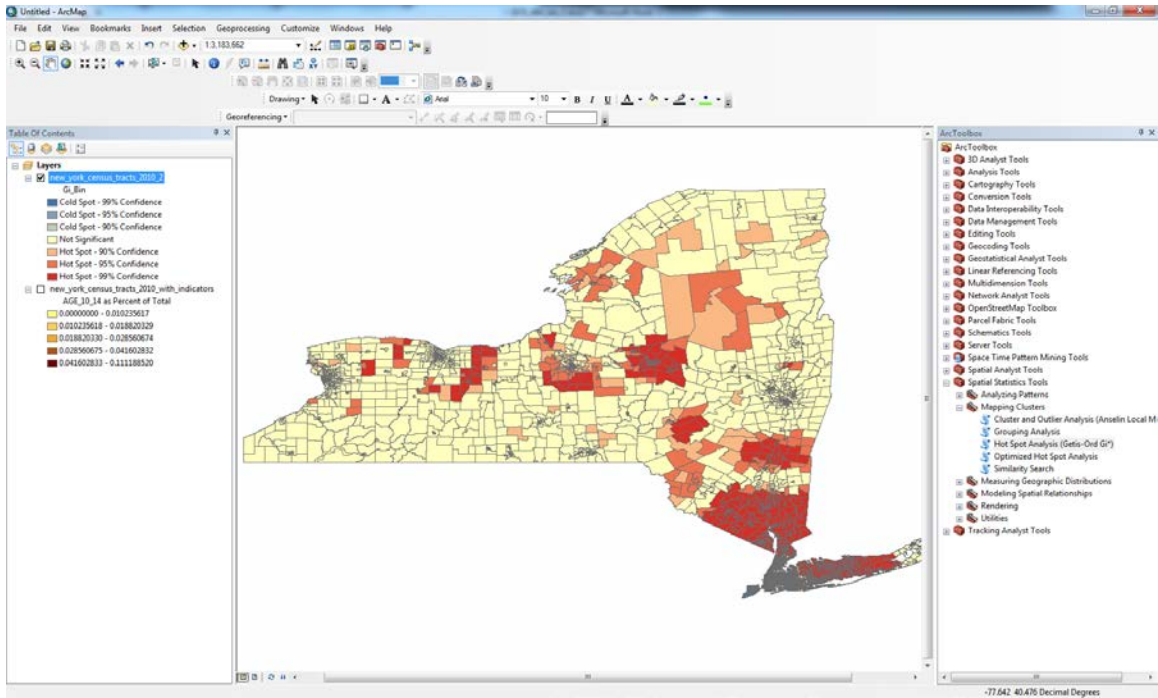
Provide a short (25-50 word) discussion if you think you can accept/reject your hypothesis and any other observations you made.