

Homework 1: Data visualization

This assignment is an exercise in cartography and data visualization. Making use of the transparency function in ArcGIS will force you to focus on the most bare bones and important aspects of your data viz.

The homework will be turned in via Google Drive. A folder link will be posted to Piazza. It is due by the beginning of class in Week 2, when you will present it in class (more on this below). Please label the file like so lastName_firstName_HW1 and use formatting instructions provided at the end of this assignment.

Process:

1. **Decide what kind of land use you would like to site.** It can be anything but try to think of something that requires a diverse set of decision factors. For example, 3 block group level decision factors is not as interesting as one distance, one interpolation and one block group.
2. **Download some data.** It can be from wherever. Opendataphilly, PASDA or check out other city open data sites including Chicago, D.C., Boston, NYC, San Francisco and onward.
3. **You need three decision factors.** Although we encoded them as continuous variables in class (values ranging from 1-10), here I want you to encode them **as categories** – high, medium and low.
4. Make sure everything is projected the same. Scale your decision factors using the Reclassify tool.
5. **Produce a final site suitability map** by *overlaying the three layers and adjusting the transparency of the layers* using the layer symbology to show how they intersect.

Deliverables:

1. **On one page**, lay out your 3 decision factors **and** your final site suitability overlay. Annotate as you see fit. You can use desktop publishing software like inDesign or Powerpoint to lay out the maps. This is a graphic design and data communication challenge! The challenge is to create an interesting and clean data visualization.
2. **Export the file as a pdf** – a word document or ppt may not hold the formatting correctly. Don't forget to put your name on it!
3. **Present your analysis in class next week in no more than 90 seconds.** This means showing us your final deliverable and then explaining in an efficient, easily understandable way what the “use case” of the analysis is and what the conclusions mean. Spend a bit of time thinking about how to present your analysis.

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