

Read the following list of questions all the way through. Then, find well documented GIS project that does a good job with all of the critical points listed below. **The project must be either a government publication a peer reviewed research.** Posters in the [Tufts GIS Poster Expo Catalog](#), These posters may provide references to qualified work. **Posters are not acceptable projects to review for this assignment.** These documents from the Tufts data lab provide tips for searching for GIS projects [on the general internet](#), or [featured on the Tufts Data Center site](#).

Important: choose a project that you feel does a good job with conceiving and describing EACH of the critical aspects for GIS projects outlined below. It will take some exploration to find worthy projects. A large part of your grade for this exercise is based on your finding a GOOD project.

Choose a project that uses GIS procedures to model a spatial mechanism using two or more input-datasets and some GIS procedures to model a spatial system. The project must go beyond simple mapping of existing data.

_____ **Links:** Provide a [long citation](#) for the work that you have chosen. A long citation includes working hyper-link to the document in question. **Check your PDF to make sure your hyperlinks work.**

_____ **Conceptual Model:** What are the real-world Things, Conditions and Relationships that are being explored?

_____ **Decision-Making Context:** Does the author discuss how the information generated by an analysis of this sort (aside from data problems or technical difficulties) might provide a means of evaluating the relative cost and/or benefits of taking an action at some particular location, versus another? If not, Can you image a such a decision-making scenario? Explain.

_____ **Spatial Mechanism:** Does the author discuss the real-world mechanics of the relationship she/he is modeling? If not, you should do your best to describe how the key relationship works – is a simple matter of distance or juxtaposition? In the real world are there moderating and mitigating conditions involved? Does the author cite any research regarding the particular behaviors involved? There may be more than one spatial mechanism being modeled. Choose the most interesting one.

_____ **Fitness of Data:** Discuss the most important **one or two** data sets that are used as proxies for things and conditions in this study's conceptual model. Be sure to address the methodology and the granularity of the data, with respect to the real-world spatial mechanism that is of interest.

_____ **Simulation:** How is the real-world [spatial mechanism](#) conceptualized and simulated using GIS procedures? Examples: Simple juxtaposition of features/cells? Simple distance association? Distance mediated or mitigated by some condition?

_____ **Expected Bias:** What sort of systematic bias: over estimation/underestimation (and of what?) would result from this simulation? Discuss the most important improvement you would make in this model regarding simulation of the spatial mechanism.

_____ **Degree of Confidence / Humility:** How does the author interpret the utility of the result? Do they express an appropriate degree of confidence / humility in the model as a decision-making tool? Do you agree?

_____ **Future work:** How could you imagine taking this work forward? I.e. by applying the same methodology in a different place or with different data, Or by modifying the methods... Use specific examples. This **may or may not** be the seed for your term project proposal.

_____ **Literature Reference:** Provide a long-citation for a piece of prior research that this project makes reference to. Make this a working hyperlink. If the author does not provide this, do your best to find it.

_____ **Data Link:** Provide a long citation for one or two of the most important data sets that were used in the project. Your link should point to the metadata. Again, if this is not provided, you should try to find it anyway.

Prepare a critical review of the project. For headings, use the words highlighted in bold, above. This outline/references should be about 2 pages, 3 Max. In the same document, add the five or six slides from your ibn-class presentation, outlined on the next page.

Format your document for easy reading in letter-sized landscape format and upload it in PDF format to canvas

Outline for Research Review Presentations.

Four Minutes, Six Slides: + 3 Minutes of Discussion

Note: that the in-class presentation does not cover every point in the critical review. Time is going to be tight, so an important part of the grade for this project is based on your ability to address the following **very concisely**. A good presentation uses graphics from the document or other sources to illustrate key facts, concepts and relationships.

Include one slide for each of the following.

1. Title, Author and publication context for your chosen project. (working hyperlink, if possible)
2. Concisely describe (Outline, Diagram) the conceptual system being explored with particular focus on the types of things, conditions and spatial mechanism being modeled.
3. Describe the potential value of a model such as this in some real-world decision-making situation.
4. For one or two of the most important data-sets:
 - a) Source: Author, Publisher, Date: URL? (working hyperlink, if possible)
 - b) Conceptual model and methodology for data collection, Granularity
 - c) Expected errors with regard to your stated decision-making situation (use illustration from the document.)
5. Describe & evaluate the procedures used to model the spatial mechanism.
 - a) Are important mediating conditions being considered / Ignored?
 - b) Is the granularity of the data suited for modeling the spatial mechanism?
 - c) (illustrate with a map or diagram)
6. Summary conclusions and recommendations.
 - d) Discuss the author's stated or implied degree of confidence in the utility of this model for decision-making – single most important data or simulation challenge.
 - e) Discuss your own degree of confidence in the utility of the model – single most important data or simulation challenge.

Students are encouraged to include diagrams and maps from the subject project, or their own. Images should be credited.