GIS 5571 Final Project

For your final project, you will choose a spatial data science project in your sub-area of interest and expertise. Importantly, your project must address six topics:

1) Data integration using automated ETL tools you build yourself in Python
2) Deterministic spatial data analysis using intermediary to advanced techniques
3) Final report in an extended form of the Lab Report template, adapted in conference with the professor
4) Connection to the academic literature – a reference section that shows you know what you're talking about as it relates to both the GIScience and the applied problem area
5) A series of Jupyter notebooks that are exceptionally documented and use a mixture of Esri and FOSS GIS tools
6) GitHub repo exhibiting your work, with exceptional documentation

Other than these requirements, the project is wide open.

Milestones:

Prospectus: Fill out the Lab Report template as a first draft. Include hand sketches or mockups of the types of results you expect to show.

Draft 1: Get all your data integrated and do a cursory analysis. At this point, your project should have some potential results, but still be in the early phase. In other words, you're done with an exploratory spatial data analysis, but not finished with coming to final discussion points or conclusions.

Presentation: This is the final draft of your results in presentation form. It should be structured identically to the lab report except you exchange text for verbal description.

Final Project Report: This is a polished final project.

To give you an idea of the quality expected, this is a product that could be considered for submission to an academic journal on an applied GIScience topic. Alternatively, if you have a specific set of stakeholders – say, urban regional planners for Hennepin County – the report should be of sufficiently high quality that you'd be proud to show these decision-makers your work, and you'd be comfortable having them use it to guide moderate sized public works expenditures (e.g. $5-10M of directed investment). You're professionals; you know good work. Trust your judgment and create an excellent portfolio piece.

Be in conversation with me throughout the semester. I'm eager to coach and advise.