

# Class Project

The scope of the project is very flexible and could focus on (but is not restricted to) data fusion or creating a new data product, coding up a method that does not yet exist in Python, a spatial analysis to answer a specific question, or an interactive user interface to expose/disseminate spatial information. The exact nature of your final project goal may change over the course of the class so it is more important to define a data set of interest that may be used for different goals. It is also possible to use your class project data for portions of assignments. Therefore, choosing a good data set will be useful throughout the class.

The comprehensive project is an important component of this course and students are expected to continuously work on it throughout the semester in order to be successful. Several short progress report submissions will be required in order to ensure progress is being made:

- Initial project proposal
- Update 1
- Update 2
- Final project presentation
- Final project paper

## Initial project proposal

The initial project proposal should be approximately 2 pages in length. The following items should be discussed briefly:

- Potential sources of data
  - Size of data
  - Source of data
  - Data type
  - Data cleaning and processing as necessary
  - Limitations of data
- Study area—where and why
  - Problem background
  - Literature
- Question or task
  - Primary outcome
  - Potential alternatives
- Python tools
  - Available modules
  - Competing modules
  - Need to write custom code
- Envisioned challenges
- Exploratory data analysis
  - Some simple plots

Projects will be evaluated on the overall outcome as well as how challenges are specified and overcome throughout the course. Therefore, it is imperative that potential challenges are identified early and that as spatial data scientists we are continuously problem-solving.

Several slides should be prepared (5-10) in order to share with the class. Then we will all discuss and help provide feedback. In the following class session, we will have one-on-one meeting scheduled to talk in more detail about specific project ideas and issues.

**Update 1 (tbd)**

**Update 2 (tbd)**

**Final project presentation (tbd)**

**Final project paper (tbd)**