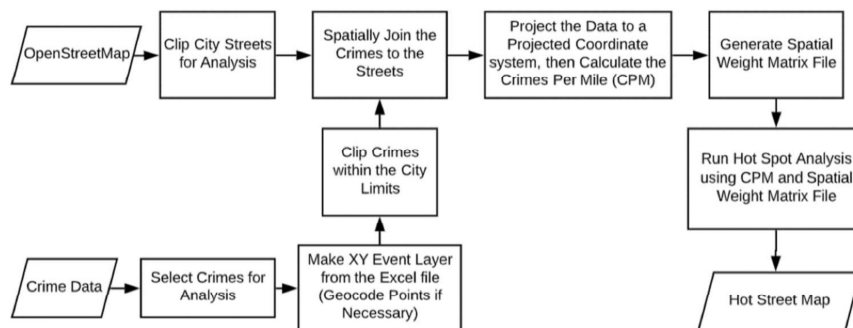# Package report template

Thursday, August 26, 2021　　3:26 PM

The document outlines a template for the required project report for each package. Your project report must include all elements listed in the template. You are welcome to add additional elements to your report.

1. Title of your report: Think about the topical emphasis of the package (not the technical emphasis). For example, we may be learning how to process data in python in a package around the topic of crime analysis in Dallas. Then the title of the report should be crime analysis in Dallas.
2. Author and date of the report
3. Objectives: What is (are) the topical question(s) the project seeks to answer. For example, where are the crime hotspots in Dallas?
4. Data:
    a. Where and how do you get the data? (data source and who own /publish the data)
    b. What is in the data, and how good is the data? (data content, how the data were collected, metadata – such as data types and spatial and temporal resolution)
    c. Why can the data help answer the question(s)?
5. Methods:
    a. Explain the general conceptual and logical framework to find solutions/answers. Clarify definitions for concepts, terms, and measures. For example, Crime hotspots are locations with a high density of crime events. Therefore, we can find hotspots by locating crime incidents and identifying clusters of crime incidents. A cluster is a hotspot when the cluster is of higher incident density with statistical significance compared to crime density in its surrounding. Since crime incidents have spatial and temporal locations, crime hotspots may shift over time.
    b. The actual methods and workflow for analysis. Below is an example:

6. Results and discussions
    a. What do you find? Maps, graphs, and tables
    b. How do you interpret the findings? Where are hotspots? What is the pattern (where they are geographically in the study area and how hotspots relate to each other? In the proximity or distributed across?) How do they relate to geographic features or socio-environmental characteristics?

7. Conclusion
    a. What is(are) answers to the question(s)?
    b. What are the new things that the project unveils? (for example, Dallas has isolated crime hotspots)
    c. What is(are) the project's limitation(s)? (for example, only based on one year of crime incident reports, or uncertainty about the locations of crime incidents).
    d. Directions for future studies (for example, extend additional years of crime data, or use spatiotemporal clustering methods instead of spatial density methods to identify hotspots)