SOC 4650/5650: PS-A - Dangerous Buildings by Ward in Kansas City

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Directions

Using data accessed from the `lecture-D` repository, create the data below related to the location of dangerous buildings in Kansas City. Your entire project folder system, including data and RMarkdown output, should be uploaded to GitHub by **Monday, May 11th** at 5pm.

Analysis Development

The goal of this section is to create a self contained project directory with all of the data, code, map documents, results, and documentation a project needs. Please ensure **all** required elements are present. You will need both shapefiles and the `.csv` file included in the `data/ps-a/` subfolder in the `lecture-D` repository.

Part 1: Data Preparation and Geocoding

The goal of this section is prepare and geocode the dangerous buildings data:

1. Load the dangerous buildings data from the `.csv` file and clean them as needed.
2. Ensure that the `Case Number` variable (or however you modify its name) does not have duplicates.
3. Pre-process and parse the address data so that you have columns for street, city, state, and zip, all properly formatted.
4. Geocode your parsed address data.
5. Project your parsed address data, and preview it using `mapview`.

Part 2: Ward Geoprocessing

The goal of this section is geoprocess the ward data to produce counts of dangerous buildings:

6. Load the precincts data for Kansas City and dissolve them into wards, removing any holes created by this process.

7. Use `st_intersection()` to remove the enclaves in the northern part of Kansas City that are erased by the remove holes process.

8. Perform a spatial join to produce counts by ward. This will result in a geometory collection, but what we are most interested in is counts that are not mapped for this assignmend. Use `st_geometry(df) <- NULL` to remove the flawed geometry and then write your dangerous buildings by ward data to `.csv` using the `readr::write_csv()` function.