SOC 4650/5650: Lab-12 - Mapping Structures at Risk of Severe Weather Using R

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Directions

Using data from the `data/lab-12/` folder available in the `module-5-static` repository, create several maps using RStudio. Your entire project folder system should be uploaded to GitHub by Monday, May 3rd at 4:15pm.

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 included in the `data/lab-12/` subfolder in the `module-5-static` repository.

Part 1: Data Exploration

The goal of this section is to create an interactive map using `mapview` for data exploration.

1. List the variables in the mobile home data using `str()`.

2. Produce an interactive visual preview of the data using the `mapview` package.

Part 2: Static Mapping for Digital Use

The goal of this section is to create a static map using `ggplot2`.

3. Using a color ramp of your choice, symbolize the percentage of mobile homes in each county. Use the metro counties boundary layer overlaid on your choropleth layer to more clearly mark the county boundaries. Make sure you edit your legend's title and add a title, subtitle, and a caption to the plot. Your caption should include your name. Finally, use one of the theme options to alter the overall appearance of your map.

4. Export your map as a `.png` file (suitable for use online or in another digital medium) at `500` dots per inch. Make sure your map is saved to the `results` subfolder of your project.

Part 3: Static Mapping for Print Use

The goal of this section is to create a static map using `tmap`.

5. Using a color ramp of your choice (though it should be different than your prior map), symbolize the percentage of mobile homes in each county. Use the metro counties boundary layer overlaid on your choropleth layer to more clearly mark the county boundaries. Make sure you add a title and scalebar to the plot.

6. Export your map as a `.pdf` file (suitable for print) at `500` dots per inch. Make sure your map is saved to the `results` subfolder of your project.

Analysis Development Follow-up

Don't forget to knit your document when you are done! Also be sure to go back and update your `README.md` file with any changes to your project's organization or contents.