SOC 4650/5650: Lab-01 - Analysis Development and Plotting

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Directions

Using data from the `stlData`, create a well-formatted notebook that creates and saves a plot of median income in St. Louis by census tract. Your entire project folder system, including notebook output and results, should be uploaded to GitHub by Monday, February 5th at 4:15pm.

Analysis Development: Create a Project Folder System

1. In your course folder system, find the `Labs/Lab-01` subdirectory.
2. Add a folder within it called `docs` and another called `results`.
3. Using RStudio, add an R Project to the `Labs/Lab-01` subdirectory.

Analysis Development: Create Your Notebook

4. In RStudio, create a new R Notebook and save it to the `docs` folder you created above.
5. Following the steps in LP-02, edit the YAML heading of the notebook to add a new title, authorship, a dynamic date field, and both `html_notebook` and `github_document` output.
6. Again following the steps in LP-02, add an Introduction section and a section that sets the notebook up to function within the course folder structure.
7. Add a Dependencies section and load the following packages: `ggplot2`
8. Add a Load Data section and load the following package: `stlData`
9. In the same code chunk as the previous question, assign the data `stlIncome` to a new data frame object named `medianInc`.

Part 1: Creating and Saving a Plot

10. Using `ggplot2`, create a histogram of the variable `mi15` - the 2015 median income per census tract in the City of St. Louis.

11. Save the histogram to the results folder you created in the first section.

Part 2: Reproducible Example

12. Create a reproducible example of the entire plot production process (including loading the required packages) and send it to Brandon and Chris in a direct message on Slack along with a well thought out question about either the plot, the code, or the wider process use to create the plot. The `R` you create does not have to be submitted nor do you have to include the `reprex()` function in your notebook.

Analysis Development: GitHub

13. Commit your changes and push them to GitHub. Go to the website and make sure they have posted. If this doesn't work, let us know. We'll go through this process again at the beginning of next class.