

STA 553 Data Visualization

Project Guidelines

Spring 2022

Minimum Requirements

- Choose **a publicly available data set** that has at least two numerical and two categorical variables.
- The sample size is at least equal to 50 times the number of variables you will use in the visualizations.
- Create a shiny app with the following components (using a tabset design) that is similar to the one we created this week.
 - a tab that has an interactive plot displaying the relationship between two variables using any of the libraries we learned this semester. Note that information about an individual record should be displayed in a hover box.
 - a tab that has an interactive chart for the comparison of distributions of numerical variables or categorical variables. For example, charts could be histograms, bar charts, boxplots, pie charts, etc.
 - a tab that displays the regression results.
 - a tab that summarizes the inferential statistics in the regression model.
 - **(optional)**. If your data set has geo-information, you can create an interactive map to show spatial patterns of your data.
- You can develop the shiny app in either shiny IDE or using RMarkdown.
 - If you create your shiny app in the shiny IDE (single or two-file version), you need to publish the app on shinyapps.io and provide the link to the app.
 - If you use the RMD to create the app, you should also publish the app and the RMD on shinyapps.io.
 - You need to submit the code to the D2L drop box.
- **The data set must be available on your Github repository so that I can run your code on my computer without modifying your code.**

Grading Rubrics

- Overall Design - the principles of data visualization
 - titles and labels
 - effective use of marks and channels
 - use of color schemes
 - high dimensional information - hover texts and popups
- Functionalities
 - interactivity
 - responsiveness
 - reactivity (bonus)
 - user-friendly input controls
- Aesthetic Appearance
 - simplicity and intuitiveness
 - consistency and clarity in using graphical features
 - color coding and highlighting
 - effective use of font size and color in the texts, labels, titles, etc.
 - scales of axes: avoiding distortion, disinformation, and misinformation.

Bonus for Experienced Visual Designers

You can develop a shiny dashboard using components in the minimum requirement. You can add as many nice features as possible to the dashboard.

Project Due and Gallery

Project Due: Friday, 5/13/2022

Please note that no late submission will be accepted!

The gallery will go live on Saturday, 5/14/2022. The link will be posted here once the site is available.