| CSC 124 Project Form | |
| --- | --- |
| Project Number | Project Number 2 |
| Project Name | Dataframes |
| Project Filenames | LastName\_Project\_2\_RCode LastName \_Project\_2\_Dataframe |
| Points | 100 points for the project |
| Assistance | This is an individual assignment. You should not request or provide assistance from/to others. However, if you need clarification or are unable to proceed, contact your instructor. |
| Project Description | Students will use the concepts learned in this course to analyze air quality. The dataset (called airquality) is already included in R. Copy the original dataset (airquality) into a new one called myairquality. |
| Tasks | **Clean the data:** After you load the data, there will be some NAs and you need to figure out what to do about those NAs.  **Create the following visulizations:**   * Histograms for each of the variables * Boxplot for Ozone * Boxplots for different wind values (round the wind to get a good number of buckets)   **Explore how to the data changes over time:** First, create appropriate dates (this data was from 1973). Then create line charts for ozone, temp, wind and solar.R (one line chart for each, and then one chart with 4 lines, each having a different color).  **Note:** For the chart with 4 lines, you need to think about how to effectively use the y-axis.  **Look at all the data via a heatmap:** Create a heatmap, with each day (using dates) along the x-axis and ozone, temp, wind and solar.r along the y-axis.  **Note**: You need to figure out how to show the relative change equally across all the variables. |
| Tasks (continued) | **Look at all the data via a scatter chart:** Create a scatter chart, with the x-axis representing the wind, the y-axis representing the temperature, the size of each dot representing the ozone and the color representing solar R.  **Final analysis:**   * Do you see any patterns after exploring the data? * What was the most useful visualization? |
| Deliverable I | **A Notepad file:**  The file should include only the R code to get the answers.  **Note:** Remember to install and load packages ggplot2 and reshape2. |
| Deliverable II | **A Document (docx or pdf)**  The file should a cover page that includes the name of the student completing the project.  Write the questions/answers/diagrams in an organized way. |
| Upload Instructions | Submit on Brightspace |