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Homework 1

IST 652

1. Data and its source
   1. For this homework I used the Donor\_data.csv file that was provided. I edited out some of the columns that I wasn’t using to answer my questions just to clean it up and make it easier to see.
2. Description of your data exploration and data cleaning steps
   1. As I mentioned I cleaned the data by removing rows in excel before I read in the csv file. I also removed the Row ID column and filtered by donors vs non-donors to get my final dataframe that I used for my analysis, converted the total and average gift amount to float and rounded the dataframe to 2 decimal places.
3. At least two clearly stated comparison questions with the unit of analysis, the comparison values and how they are computed
   1. Question 1: For each wealth type what is the average gift and total gift amount?
      1. Unit of analysis: wealth type, comparison: for each wealth type compute the average total amount gifted and average gift amount. I looped through the unique wealth types to consolidate them and then calculated the average total amount gifted and the average gift amount based on wealth type and stored it in a dataframe sorted by wealth type.
   2. Question 2: For each gender what is the average time since the last gift and how much have they gifted?
      1. Unit of analysis: gender, comparison: for each gender compute the average time since last gift and total amount gifted. I looped through the genders, sorted them and then computed the average time since the last gift and total amount gifted and stored them in a dataframe.
4. Brief description of the program
   1. My program reads in the csv file, cleans the data so it is usable and loops through the dataframe to compute the answers to the questions that I was asking.
5. Description of the output files, which should include an analysis of your results along with a final conclusion about your overall results
   1. My output file for my first question is a dataframe of 9 wealth types with the average total amount gifted and the average gift amount by wealth type. We can see that most wealth types donate between $130-180 total with the exception of group 8 that only on average donated $72. The average amount gifted each time ranges from $8.50 to $12 and tells us that each group donates about the same amount each time on average so the groups with higher total amounts gifted must be donating more often.
   2. My output file for my second question is a dataframe of the two genders with the average time since the last gift and the average total amount gifted by gender. For this women averaged 1 month longer in time since last gift and about $8 less in total amount gifted than the men.