STAT200 Introduction to Statistics

Assignment #2: Descriptive Statistics Analysis and Writeup

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In the first assignment (Assignment #1: Descriptive Statistics Analysis Data Plan), you developed a scenario about annual household expenditures and a plan for analyzing the data using descriptive statistic methods. The purpose of this assignment is to carry out the descriptive statistics analysis plan and write up the results. The expected outcome of this assignment is a two to three page write-up of the findings from your analysis as well as a recommendation.

Assignment Steps:

Step #1: Review Feedback from Your Instructor

Before performing any analysis, please make sure to review your instructor's feedback on Assignment #1: Descriptive Statistics Data Analysis Plan. Based on the feedback, modify variables, tables, and selected statistics, graphs, and tables, if needed.

Step #2: Perform Descriptive Statistic Analysis

➢ **Task 1: Look at the dataset.**

- **(Re)Familiarize yourself with the variables.** Review **Table 1: Variables Selected for the Analysis** you generated for the first assignment as well as your instructor's feedback. In addition, look at the data dictionary contained in the data set for information about the variables.

- **Select the variables you need for the analysis**.

➢ **Task 2: Complete your data analysis,** as outlined in your first assignment, with any needed modifications, based on your instructor's feedback.

- **Calculate Measures of Central Tendency and Variability**. Use the information from Assignment #1 - **Table 2. Numerical Summaries of the Selected Variables**. Here again, be sure to see your instructor's feedback and incorporate into the analysis.

- **Prepare Graphs and/or Tables.** Use the information from Assignment #1 - **Table 3. Type of Graphs and/or Tables for Selected Variables.** Here again, be sure to see your instructor's feedback and incorporate into the analysis.

Step #3: Write-up findings using the Provided Template

For this part of the assignment, write a short 2-3 page write-up of the process you followed and the findings from your analysis. You will describe, in words, the statistical analysis used and present the results in both statistical/text and graphic formats.

Here are the main sections for this assignment:

- ✓ **Identifying Information**. Fill in information on name, class, instructor, and date.
- ✓ **Introduction.** For this section, use the same scenario you submitted for the first assignment and modified using your instructor's feedback, if needed. Include Table 1 (**Table 1: Variables Selected for the Analysis)** you used in Assignment #1 to show the variables you selected for the analysis.
- ✓ **Data Set Description and Method Used for Analysis.** Briefly describe the data set, using information provided in the data set file. Also describe what method(s) (i.e., TI Calculator, free web applets, Excel) you used to analyze the data.
- ✓ **Results.** In this section, you will report the results of your descriptive statistics data analysis. For **each** variable, fill in the following sections:
  - **Variable (#): (Name).** Fill in the name of the variable. Note: Income was included for variable 1.
  - **Numerical Summary.** Fill in **Table . Descriptive Analysis for Variable** with your computation. Below is the template table; be sure to include the name(s) of the measures used as well as their values. Since there will be no measure of dispersion for the qualitative variable, just enter N/A for not applicable. Note: The information for the required variable, "Income," has already been partially completed and can be used as a guide for completing information on the remaining variables.

Variable	n	Measure(s) of Central Tendency	Measure(s) of Dispersion
Variable:			

  - **Graph and/or Table.** Put the graph or table for the variable in this section.

- **Description of Findings.**
    - Briefly describe the descriptive statistics measure(s) that was/were calculated and explain why was it/they the appropriate one(s) to use.
    - Describe the results of the analysis in everyday language. *Please consult your textbook and information contained in our LEO classroom for examples.*
- ✓ **Discussion and Conclusion.** Organize the discussion to address findings for which you presented results. Briefly discuss each variable in the same sequence as presented in the results. What has the highest expenditure? What variable has the lowest expenditure? If you were to recommend a place to save money, which expenditure would it be and why? Note: The section should be **no more than 2 paragraphs.**

Assignment Submission: Name the file that contains your completed "Assignment #2: Descriptive Statistics Analysis Writeup Template" using the following format: "Assignment2-StudentLastName." Submit it via the Assignments area in the LEO classroom in the "Assignment #2: Descriptive Statistics Analysis Writeup" folder.

Grading Rubric for Assignment #2

Introduction	10%
Description of data set and method(s) used for analyzing the data	10%

Results. For **each** variable (10% for each variable):
• Numerical Summary: Accurate/appropriate results reported in table.
• Graph and/or Table: Accurate/appropriate graph or table.
• Findings:
    ○ Description of and explanation of measure(s) used.
    ○ Explanation of the results of the analysis, including information from both the numerical summary and graph and/or table.
	50%

Discussion and Conclusion. Described results and provided answers to questions about expenditures.	20%
Writes clearly, concisely, and with few errors. Clearly presents material graphically. Easy to understand.	10%