Assignment #3: Inferential data analysis report

Overview   For this assignment, you will write a brief report using inferential analysis to address a specific question. Goals for this assignment are

- to use the tools we have developed for describing and doing inference with data

- to use computing technology to work with a large data set

- to prepare a carefully designed and well written report

For this assignment, you will use the data set "WORKERS" that comes with the text. This data set is described in the Data Appendix starting on pg. D-8. The data set itself is available as a *Minitab* worksheet in the file `WORKERS.MTW` within the folder `appendix` in the textbook data folder.

Here's the specific question you'll address: "Is there a difference in mean earnings between females and males for 25 year old college graduates (with no graduate degree)?" To address this question, you'll need to pull a subset from the full data set. You can extract this subset in *Minitab* by going to the **Data** menu and choosing **Subset Worksheet....**

One issue you'll need to confront is the presence of *outliers*. A strategy for dealing with this is to limit attention to comparing mean earnings for those who earn less than some specified amount.

Specific requirements   Submit a two to three page report by Tuesday, May 4. Your report should include

- an introductory paragraph giving a brief description of the data set

- a paragraph, with related table(s) and/or plot(s), describing the two sample distributions (for female and male) of the variable `EARN` for this data set

- a paragraph or two, with related table(s) and/or plot(s), describing the inferential analysis you do to address the main question

- a concluding paragraph that summarizes the main result of your inference

Your paper should be written with the following requirements:

- Use standard letter paper with reasonable margins and a reasonable font size (11 or 12 pt). Printing double-sided is fine.

- Use double or one-and-a-half line spacing to allow room for me to write comments.

- Label each table and figure (Table 1, Table 2, Figure 1, etc.) and give a reference in the text to each one (e.g. "...as shown in Table 2.").

- For tables and figures, either put all of them after the text or insert them in relevant places within the text. Tables and figures within the text should be placed between paragraphs rather than within paragraphs. Each table or figure within the text should be placed after the paragraph in which it is first referenced.