Examination of Eight Indicators of Performance in Business Statistics

Two professors of business statistics wanted to better understand their students. Particularly, they were interested to discover what variables might help predict and explain students' performance in business statistics. They collected data on nine variables listed and defined below. The researchers have hired you to help them prepare a report where you will (1) analyze each of the variables independently and (2) examine the relationship between the two X variables and the Y variable. Use concepts and tools from chapters 1, 2 and 3 of your textbook to prepare the first report. Analyze each of the variables separately and then study the relationship between any two of the X variables and the Y variable. One of the two X variables must be quantitative and the other one must be qualitative. The overall purpose of the first case analysis report is for you to show how effectively you can apply the statistical concepts and tools you have learned from the first three chapters to analyze the data in this case and make meaningful interpretations for theories and practices related to these variables.

X1= How would you rate yourself with respect to your knowledge about computers? 1 (very poor)   2 3 4 5 6 7 (excellent)

X2= How many hours per week do you use the Internet? _____hours per week

X3= What is your classification?   1. Freshman   2. Sophomore   3. Junior   4. Senior   5.Graduate

X4= Are you a first generation college student?   1. yes   2. no

X5= Your gender: 1. male   2. female

X6= Your age: _____Years

X7= Your ethnicity: 1. African   2. Anglo   3. Asian   4. Hispanic   5. Native American   6. Other

X8= Extravert (E) or Introvert (I) Personality Type of Student

Y= Course grade on a 100 point scale

Please download the data file for this case named: JSMCase1

Include the following in your report:

1. Indicate the scale of measurement--*nominal, ordinal, interval or ratio*--for each of the 9 variables. Explain
2. Indicate the type of variable--*qualitative or quantitative*--for each of the 9 variables. Explain
3. Choose one qualitative X variable to create (1) a *frequency distribution table* and (2) an appropriate *bar or pie chart* based on that frequency distribution table. Interpret the implications.
4. Choose the quantitative Y variable to create (1) a *frequency distribution table* and (2) a *histogram* based on that frequency distribution table. Interpret the implications.
5. Create a *crosstab* to show the relationship between your chosen X variable and the Y variable. Interpret the implications.
6. Create a *scatter diagram* between one quantitative X variable and the Y variable and interpret its meaning.
7. Use appropriate *numerical measures* of descriptive statistics from chapter 3 to study your variable Y. Make sure you explain how each of the computed numbers can be useful.
8. Using an assignment tool in Blackboard, upload both your Word document and your Excel file to submit this report by 11:59PM of March 28, 2014.   [100 points for the case analysis report]