

Research Project – Fall 2019 – IST 203 (sections 1, 2, and 3)

As demonstrated in class yesterday, in this project you will apply the knowledge and skills you have acquired in this course to analyze data and present your findings. The data (attached in an Excel Workbook: Sales Data for Research Project) is simply sales data for the transactions of 10 companies. The data includes sales order number, region, product, quantity sold, etc. in addition to applying the technical skills you have acquired, this project “forces” you to go a bit outside of your comfort zone! That is, rather than following step-by-step instructions like in the mid-level assignments, here you are the one who gets to decide (while meeting the requirements, of course, such as using the pivot table tool) what analysis to perform and which chart to use.

The Project

You are a new employee responsible for analytics at one of the 10 companies listed in the data sheet (pick up any company you want –from K to T) and consider it to be your company for the whole project). Your manager has asked you to analyze the data and come up with insights that would shed light at your company’s performance. The manager asked you for at least 7 charts along with a brief “story” that the charts tell. For example, how do your company’s revenues earned from the West region compare to the North region? What about revenues from different distribution channels? How do we compare to our competitor(s)? Etc. Again, your manager DOES NOT want a chart dump! The manager wants a story that provides insights and answers the question: “How are we performing?” That story is supported by charts and other information that you learn from the data.

The project is worth 10% of the course grade and will be marked over 100 points (see deliverables and respective points below). In addition to completeness, the points will also be awarded based on the coherence of the report/story (does it provide a clear insight or is it just unrelated charts/statements?), and how well-written it is. Creativity will also be rewarded.

Project Deliverables:

- 1- **An Excel workbook** that includes your analysis and charts:
 - a. Create pivot tables to use for your analysis. **(10 points).**
 - b. Create **at least 5 pivot charts** that offer interesting and useful insights AND that relate to the story you are telling in your report. That is, your report is NOT a place to insert random charts, but rather the charts you use have to link to your story. **(25 points).**
 - c. Create a mechanism in the main data sheet to enable your manager to enter a sales order number in a cell and be able to learn what the product was, what the distribution channel was, and what the quantity sold was (hint: you will create a VLOOKUP function for each one). **(10 points).**

As I have shown in class on Monday (November 4th); a pivot table is not hard to create, but you need to make good effort in trying around until you are able to create meaningful charts. You also have to be careful with the value calculations. As shown in class, the Value field (in the pivot table pane) calculates by “sum” by default. Sum is not always a meaningful calculation.

2- **A Word report** (3-5 pages) that:

- a. Has a brief introduction summarizing what you did in the report and what your findings are. It has to be clear which company is the one you are employed at (e.g., company K). **(5 points).**
- b. The body of the report has to contain the story, supported by charts and other evidence. For example, this could be a part of a story:
“Our company (x) was doing well compared to our competitor (company Y) in 2017 for products A, B, and C. However, this year they have better revenues than us. On the other hand, our overall sales in the South have significantly increased compared to the years before. Also, our sales to hypermarkets have increased.” **(30 points).**

Note: You get the picture! You are providing insights to your manager that he/she would not have been able to acquire by just looking at a data range with 6559 rows! Of course, you support your statements with meaningful charts.

- c. Conclusion: a paragraph or two highlighting your main findings and making suggestions for future action based on those findings. **(5 points).**

Very Important Note: Your manager should NOT have to look at the Excel sheets to understand the report. That is, while the Excel workbook has to be provided to the manager, he/she should be able to find the outcomes of your Excel analysis in the Word report, including the charts (**this means that the charts have to be present in both the Excel workbook and the Word report**).

3- You have to use **SAP Cloud Analytics** to run extra analysis **(15 points):**

- a. Go to: <https://info.sapdigital.com/sap-analytics-cloud-trial.html> and register for a free trial (note that the confirmation email may go into your Spam folder).
- b. Create a “new story” (this is the name SAP gives to the visualization projects on their portal; not to be confused with the story you’ll be telling in your report) and save it in your full (first and last) name.
- c. Create meaningful charts and **use at least two of them in your Word report (you will take screenshots of the charts from SAP website. The screenshots MUST show the project/story’s name as your own full name.)**
- d. At least one chart has to be either a heat map or a tree map.
- e. Please see the attached SAP Workshop sides for guidance.
- f. I will be holding a demonstration of SAP Cloud Analytics in class on Friday, November 8th. It is strongly advised that you register for the free trial before that so that you can try the platform and ask any questions.

As you see, nothing that is required in this project goes beyond what you’ve learned so far. If you did the training, hands-on, mid-level, and capstones, you should be more than ready to work on the project. If you find yourself struggling, go back and check the relevant e-text chapter and/or simulations/assignments to refresh your memory about how to perform a certain task. You are welcome, of course, to ask me questions seeking clarity on any of the project requirements. I count on your understanding though that I will not be able to answer questions that would amount to me doing the project for the student! **Best wishes for you all.**