

ASSIGNMENT NO:1

Assignment Details:

As an Information Technology professional, much of your decisions are derived by Information Technology (IT). IT provides knowledge based on data that help business professionals to take better and more informed decisions. In this project, you are to utilize one of the most widely used business analytics tool, Tableau software package, to make a number of visualizations that will help to make some specific managerial decisions. The focus of this assignment is the creation of visualization presentation and not to become an expert with Tableau visualization tool. Feel free to utilize online resources and explore Tableau website for instructional videos and demonstrations. It is important that your visualization dashboards show presentations nicely by adding the necessary elements (i.e., include title, annotations, sorting, coloring/highlighting, etc. as you see fit to best communicate your message).

Task 1: Using the Customer Service Call dataset provided with this assignment, you are to design four different Tableau dashboards with the following specifications:

Dashboard 1: Performance Analysis

- a) Make a visualization worksheet showing total number of calls separated by incoming and outgoing serviced by each sales representative (Rep ID).
- b) Make a visualization worksheet showing which sales reps have the largest number of income calls.
- c) Make a visualization worksheet showing which sales reps have the largest number of outgoing calls.
- d) Make a visualization worksheet showing which sales reps spent the busiest time (Busy Minutes) (including both incoming and outgoing calls).
- e) Create a dashboard with the above four worksheets and name it Performance Analysis.

Dashboard 2: Call-Time Analysis

- a) Make a visualization worksheet showing the average wait time (incoming wait and during call wait) for each of the two branches.
- b) Make a visualization worksheet showing the average wait time (incoming wait and during call wait) for each of the three call purposes.
- c) Make a visualization worksheet showing call volume over each of the time periods (hours) break out by two branches.

- d) Make a scatter visualization worksheet showing the relationship between incoming wait time and during call wait time with time blocks as the individual data points.
- e) Create a dashboard with the above four worksheets and name it Call-Time Analysis.

Dashboard 3: Efficiency Recommendation

Review the data and create a dashboard with visualization(s) that support downsizing the company for efficiency. Feel free to create as many visualization worksheets as needed to support your recommendation.

Dashboard 4: Best Employee Recommendation

Review the data and create a dashboard with visualization(s) that support recommending one best performing employee. Feel free to create as many visualization worksheets as needed to support your recommendation.

Task 2: For your output, please post your resulting worksheets and dashboards to Tableau Public web space. You will need to make a tableau public login. Once your Tableau dashboards are uploaded on public web space, include the URL for your work on the Tableau Public web space into your report.

Task 3: Write a report supporting all of your analyses. Your report must discuss each of your dashboards with adequate explanation for someone with very little to no technical knowledge to retrieve useful information for making informed decisions.

What to Submit?

- a) Upload all of your visualization worksheets and dashboards on Tableau web space and include a link to the URL into your report.
- b) Submit your project report as a single PDF file format via Blackboard prior to the due date.

Helpful Resources:

Tableau Download Page: <https://www.tableau.com/products/desktop/download>

Tableau Learning Resources: <https://www.tableau.com/learn>

Tableau Public Web Space: <https://public.tableau.com/en-us/s/>

Grading Rubric:

- Completeness of Tableau Dashboards - 70 points
- Analyses Report - 20 points
- Professionalism, formatting, references, & citations - 10 points

Note:

- Your writing must follow American Psychological Association (APA) guidelines for style, citations, and references.
- Your submission must be free from major grammatical errors.
- Attention will be given to professionalism.

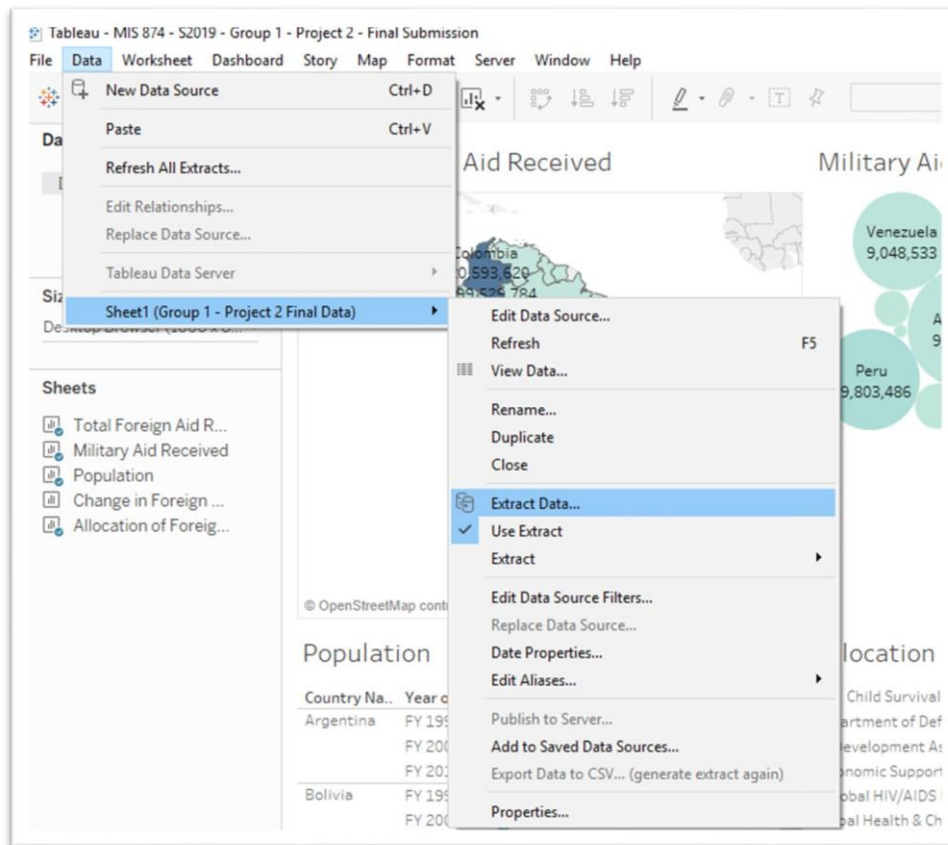
How to publish your Tableau dashboard online publicly***Connect to the correct server:***

1. Go to <https://public.tableau.com/>
2. Create a Tableau Public account. This is different and independent of tableau.com, tableau server, and tableau online accounts.
3. Once an account is created, open Tableau Desktop Application and open your project.
4. Along the top Menu Bar, click “Server” and select “Sign In...”
5. In the Server: Box, Type in <https://public.tableau.com> as the server you want and then it will prompt you to log in to your Tableau Public Account.
6. Log in by clicking “Connect”

Data Extraction:

We are working with a small dataset, but it must be prepared in a particular way. We will first extract the data to upload our workbook. You can find out more information here https://onlinehelp.tableau.com/v2019.1/pro/desktop/en-us/extracting_data.htm

1. On the top menu bar select “Data”
2. At the bottom of the menu, move the cursor over the last option available, it may be similar to how you titled the excel file or dashboard file that you are using.
3. Once over the menu option it should open more menu options with “Extract Data” as a choice not greyed out. Look at figure below. Click that option.



4. Choose “Single Table” and “All Rows” and then choose extract.
5. This will produce a new file, save it with wherever you have been saving your Tableau Workbook.

Publish Your Workbook Online:

1. Go to the top Menu bar and select “Server”.
2. Ensure that you are logged in and connected to <https://public.tableau.com/> from above.
3. Go to the “Server” menu again and select Publish Workbook.
4. A new “Save Workbook to Tableau Public” box will appear.
5. Give the Workbook a title. (Something like MIS 874 – S2019 – Group # - Project # as this will be publicly what it will be called unless you choose to edit it later) and then select “Save”. And it will publish it to Tableau Public’s website.
6. Go to a web browser and log in to <https://public.tableau.com/> and navigate to your project.
7. You can follow this guide on how to share a link with someone else.

[https://onlinehelp.tableau.com/current/guides/get-started-tutorial/en-us/get-started-tutorialshare.htm#Use Tableau Public](https://onlinehelp.tableau.com/current/guides/get-started-tutorial/en-us/get-started-tutorialshare.htm#Use_Tableau_Public)

ASSIGNMENT NO:2

Tableau Project: The goals of the assignment are for you to learn the capabilities provided by Tableau (it is one of the best commercial systems), learn the basic visualization methods that it provides and assess its utility in analyzing data. You may ask and/or assist others for help figuring out how to use Tableau.

1. Select a data set either from kaggle.com (share the page with Dr. Yildirim to obtain an approval), or the IAC Data set (<https://iac.university/download>). Ideal data set will have many columns and at least few hundred of rows (data points). Larger data sets are preferred. Please make sure that you also have time dimension as part of the data, if you would like to use a subset of your data in the forecasting as part of this exercise.
2. For the data set that you have selected, develop few interesting questions – put yourself in the shoes of a data analyst, and think about all the different kinds of analysis tasks that a person might want to perform. For instance, someone working with breakfast cereal data might have analysis tasks like:
 - Find all the information on Cocoa Pebbles.
 - Identify the cereal with the least fat that is also high in fibre.
 - What is the distribution of carbohydrates in the cereals?
 - Does high fat mean high calories?
 - Which of the following three cereals is best for people on a diet?

Do NOT make all of your questions be about correlations or min or max values.

3. Write a report – Part I: Give a short summary of your data, e.g., size, number of rows and number of columns, some short story why this data set was chosen and what it shows. Part II – List your questions and answers, along with a screen shot showing the visualization you used to answer each question. One page per question – screen shot and narrative (at least 100 words). Each question should be answered with a different visualization; Part 3 – Critique the Tableau (or PowerBI-if you are using it) system. What are the Tableau (PowerBI) software strengths and weaknesses? For what kinds of user tasks is the system particularly well suited?

Submission: Your document should be in PDF format and is limited to a minimum of 8 pages and a maximum of 11 pages, including the cover sheet. Use Times Roman 12-point type with normal margins, 1.5 line spacing. Submit the paper via Blackboard. Submit your Tableau file using my Tableau online page at

<https://prod-useast-b.online.tableau.com/#/site/dryildirimime883supplychainanalyticsclass/home>