# SIT378 – Dashboard Creation Reflection

## **1. Analytics Team**

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## **3. Document Purpose**

- This document is for all our team members to reflect on their experience with the process of producing Tableau Dashboard – from start to finish. This will be read by the team and to be considered during the creation of our Dashboard Guide.

## **2. Team Reflections**

### a. Anh Quan Hua

- Personally, I would like to divide the dashboard creation process into three main phases: Data Reception, Data Analysis and Visualization.

- In the Data Reception steps, one should perform the following steps to ensure clarity and help streamline the documentation process:

+ Identifying the data structure. This includes the data formats, types and potential ambiguity.

+ Creating and setting analysis directions/purposes. This will help you tremendously with focusing on the codes necessary for your analysis.

+ Viewing the general statistics for our datasets (the mean, median, average, etc.) to identify the future cleaning process.

- In the Data Analysis step, although I am yet to have professional experience in regard to this topic, some of my advices are as followed:

+ Experimenting with different options of data-cleaning to see how the outcomes differ.

+ Generating a general correlation matrix for the data to spot any easy linear relationship in our set.

+ Aligning your analysis with the purposes/directions that you set out previously. This means that you should narrow down your selection to the meaningful part of dataset.

+ Visualizing your findings in your language of choice. This will prove to be very helpful later on when creating Tableau Dashboards – especially with complex datasets.

- The last part, Visualization, has been briefed touched on in the previous step but what I found to be quite helpful:

+ Unlike with the analysis phase, your future dashboards should be designed with visualizations that all help to support/answer a question. This means that you should clearly identify the purpose of your dashboard and to be able to expect what the audience can get from your dash.

+ The previous visualizations done in your analysis (in your coding language of choice) will prove to be very helpful in creating graphs and charts in Tableau as you immediately know how to manipulate your data (different calculations and modifications).

### b. Gouri Nandan Reddy Gangavaram

When working with a particular dataset and trying to visualize them, I faced my fair share of issues and the need of upskilling in that matter. Below, are some of the points which I found to have spent more time on thinking and finding solutions by either googling or asking queries to other team members.

* Working with a particular dataset, each has their own set of data for each column in the dataset, each having their own dataset and the range of values. This needs to be understood beforehand in a more precise manner when working with the data in tableau.
* Upskilling in Tableau in terms of extracting data from the dataset, working with distinct types of graphs and how each data can be interpreted, and publishing the dashboard publicly for everyone’s visibility.
* Classifying each data column into floating type, categorical data type or series data type for identifying the best set of graphs that are appropriate for visualizing the data.
* Cleaning the dataset using python or using filters in tableau was a challenge to understand, but it is a basic requirement before using the input data for having more reliable and consistent results.
* Producing different ideas to co-relate different columns in the dataset and documenting them each to have a more appropriate visualization at the end catering to our company’s requirements as in our case it was sales and fitness analysis.
* Creating Dashboards which give meaningful yet easy to understand statistic reports from the input data was a bit challenging, as one needs to plan out the end outcome and create visualization accordingly.
* Documentation of these graphs is as important as creating meaningful visualizations, this also was a challenge as in creating any documentation is easy but creating meaningful and detailed documentation while following company standard document structure is difficult.

### c. Nithini Bogahawattha

* Tableau is defined as a visual analytics platform transforming the way we use data in order to solve problems.
* The initial task assigned for my team was to design a tableau dashboard to present the data which has been collected about the fitness trackers in a live dashboard.
* During the process of designing my tableau dashboard at first, I had to clean up the data which was in the CSV file and identify and categorize the data into it will be easier for me to design the dashboard.
* Moving forward I had to import the CSV file of data collected into Tableau. Being a Tableau user with a limited amount of knowledge about Tableau I found it difficult to figure out how this process needed to be done. Therefore, I had to go back and forth and watch the tutorials on my previous semester’s subject. As I learned a bit about tableau during my previous semester.
* After extracting my CSV file into Tableau software my initial goal was to create a persona that will tend to be an example of an Audience who will be looking into the dashboard. In the persona, I have included four different questions which were needed to be answered by the Audience.
* In the process of creating my live dashboard, I decided to include the answers to the questions included in the persona. The live dashboard includes four different types of graphs which will simply visualize and provide the answers for the audience.
* In the beginning, I found working with Tableau much more difficult due to my lack of knowledge of Tableau.
* Creating a meaningful live dashboard along with providing answers to the questions of the Audience was challenging. As I had to consider every bit of the data which was included in the CSV file. As I had to decide what data sets needed to be used to answer each question in a meaningful manner.
* Moreover, one of the biggest challenges I had to face at the end of creating the live dashboard was publishing the dashboard to the public. With the help of my team member Gowri, I was able to overcome this challenge.
* However, in the end, I was able to create a meaningful live dashboard for the audience. During the upskilling process, I was able to understand, identify and learn new areas about Tableau software which I found interesting. I am looking forward to upskilling more in my tableau knowledge in the future.

d. XIAOLU LI

* Tableau Dashboard is designed to display the relationship between variables and data changes in a dynamic mode. Therefore, data input, variable selection, chart selection and analysis of results are important components of Tableau Dashboard. I'll share my successes and difficulties with the Tableau program work next, along with advice I think will help in future work.
* During my work, the data is imported as csv and the data needs to be tidy first before being imported into Tableau. I use python to process data, remove null values and abnormal values, and do pre-analysis of variable relationships, which will help to select suitable variables for presentation in Tableau. In addition, Tableau can implement mathematical processing of numerical data, so there is no need to perform mathematical calculations before importing.
* Tableau enables multivariate interaction to analyze correlations and predict the future. I would like to share a little bit of experience: seek more relationships between variables in the data processing phase and try logical combinations in Tableau. Combining multiple variables according to general market laws may reveal more correlations. Such as price, region, and product type.
* Choosing a suitable chart can help the analysis more intuitively and effectively and show the results of the analysis. While Tableau can analyze multiple variables at the same time, overly complex data and variable results can obscure the results of the analysis. In addition, Tableau's dashboard can display multiple charts at the same time and link each chart to keep the selection of charts as clear and clean as possible.
* My little bit of experience is choosing similar color and size arrangements when visualizing data. This arrangement will make the data changes more clearly displayed. Complex colors can sometimes affect judgment.
* I encountered some difficulties in the Tableau work process and can improve my skills and seek solutions in the following work.
* In the process of creating charts in Tableau, I encountered that the data was not tidy as expected, or the data increased or decreased. It is a good technique to update data as it goes.
* When visualizing data, I’m confused about whether details need to be displayed in the form of a table. On the one hand, I feel that details may help to understand the content of the chart. On the other hand, the size of the table affects the display of other charts.