Semester 1 – 2021/2022

Course Code	DS620
Course Name	Data Visualization
Assignment type	Critical Thinking
Module	06

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<u>**Solutions:**</u>

Data Storytelling

Introduction

In this critical thinking, our mission is to create an MS Power BI dashboard file

Dummy Marketing and Sales dataset, which includes information about different promotion

budgets and sales. (The dataset from Kaggle in the following link:

https://www.kaggle.com/harrimansaragih/dummy-advertising-and-sales-data). The first aim

is to create an explanation for the various promotions seen in the dataset. In the second

objective, we will construct a dashboard that displays the results of several promotions. In the

third objective, we'll create a story that consumers will be able to see clearly in our

visualizations. The last objective is to write a summary of your observations and outcomes.

An explanation about different promotions

The first page of Power BI is "Dataset Information" that explains the categories of the

influencer variable and three promotions in the Marketing and Sales dataset. Also include the

total sales and how many records (observations) in this dataset. In figure 1 we can see the

Dataset Information page.

Figure 1

Dataset Information Page
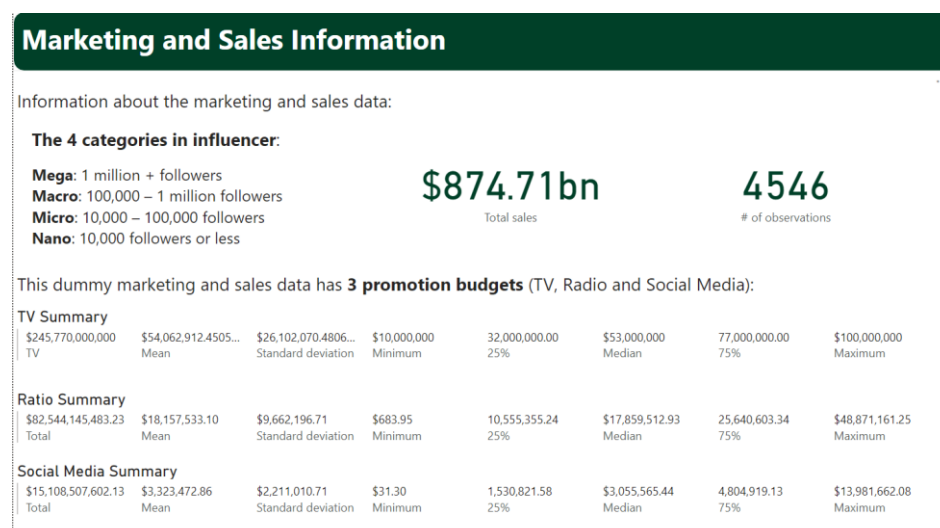
The Power BI dashboard for the Marketing and Sales Dataset

The second page of Power BI is the "Dashboard" that reflects on different promotions' outcomes. In figure 2, we can see different visualizations for the three promotions with respect to sales at the bottom in the scatter plot chart. Top 20 sales with their influencer type on the left side. At the top we can see two visualize, a segmentation of the three promotions on the left donut chart, and sales by influencer type on the right donut.
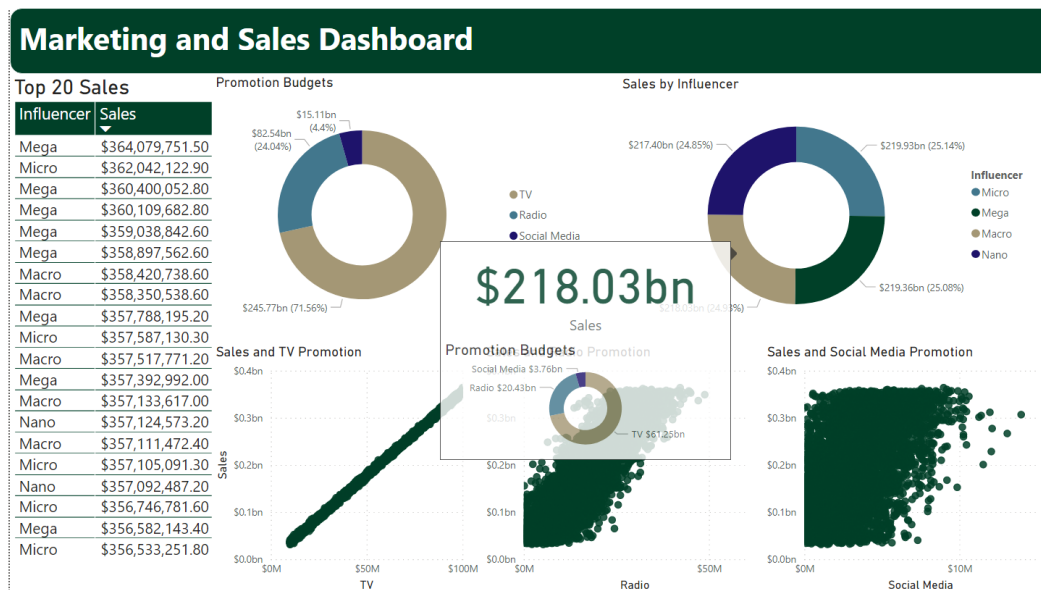
Figure 2

Dashboard Page
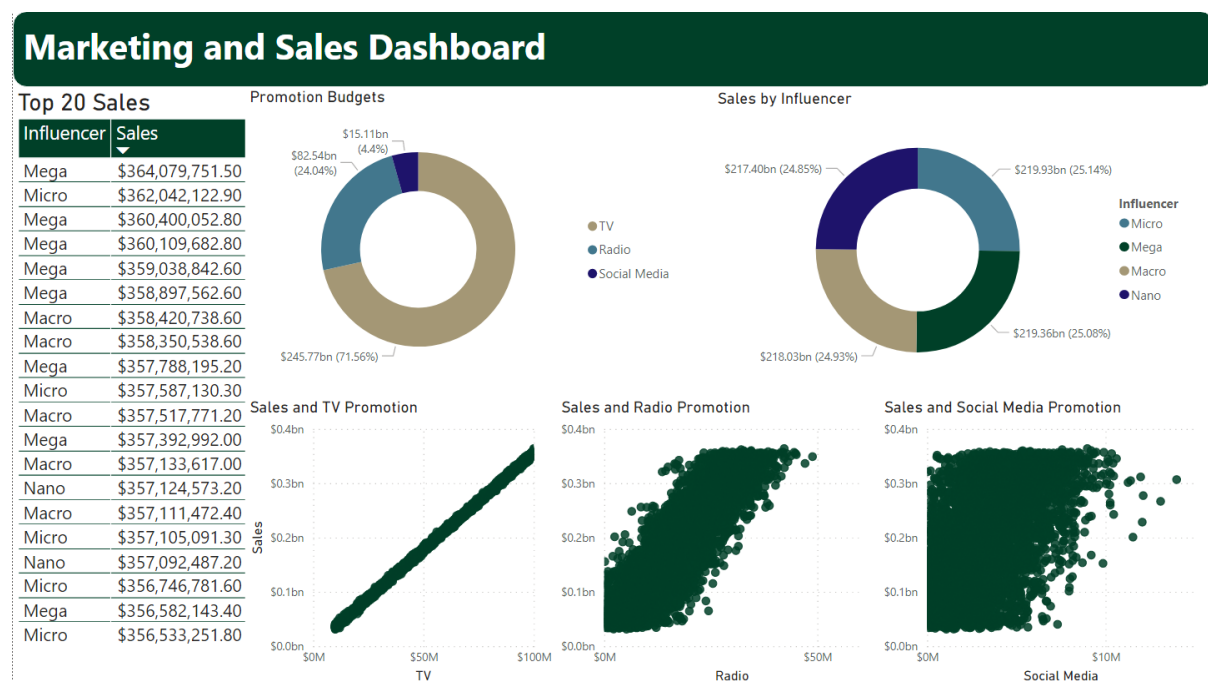
A tooltip feature added to Sales by Influencer chart shown in figure 3 below. When we hover the cursor on an influencer type (for example we hovered on Macro as seen in figure 3), we can see the total sales per influencer type and the promotion budgets per influencer type. This feature created using a tooltip feature provided by Power BI. A Tooltip page (as shown in figure 4) was created to use this feature that contains two visuals.
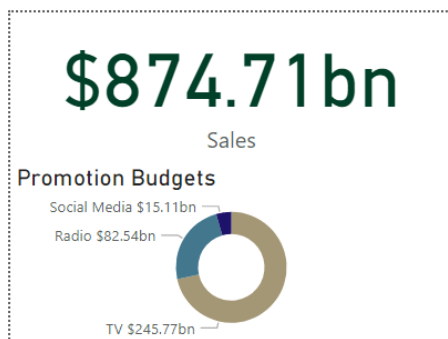
Figure 3

Tooltip feature Page

The first visual is the total sales that will view the total sales of each influencer type. The second is the promotion budgets per each influencer type.

Figure 4

Tooltip Page

A summary of the results and findings

First thing all rows have null values have been removed. New columns created that convert the promotions into a million scale and the type of column changed to currency.

We know the fact that this dataset is a dummy dataset, because we can see some of the results are not realistic. For example, there are two from Nano influencers (which have 10 thousand or below followers) in the top 20 sales! If this happened in real-life we must suspect those two influencers.

Promotion budget is clearly goes to TV as shown above in the left donut chart which is 71.56% of the consumed budget. But why? In the bottom three charts are explaining that Sales and TV scatter plot have a positive linear relationship and less variance. Which is very desirable situation by data analyst or for whom are concern.

The right donut chart above views that the influencer types are balanced. This because this is a dummy dataset not a real one.

References

Knight, D., Knight, B., Pearson, M., & Quintana, M. (2018). *Microsoft Power Bi Quick Start Guide: Build Dashboards and visualizations to make your data come to life*. Packt Publishing.

Saragih, H. S. (2021, March 12). *Dummy Marketing and sales data*. Kaggle. Retrieved November 3, 2021, from https://www.kaggle.com/harrimansaragih/dummy-advertising-and-sales-data.