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Assignment 2 – Tableau Application

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**Introduction**

The data set used here for analysis/visualization is a social media dataset containing information about twitter data. Using this data, a twitter dashboard with visualizations and KPIs will be created which will help us to investigate in-depth of data and enable data driven insights for decision making. Understanding how to analyze Twitter data thoroughly helps keep a brand out of the dark. Twitter Analytics allows users to collect data about how a campaign was performed and the trends to follow in the future.

A social media dataset containing web-scrapped twitter data is used to create our dashboard. The dataset contains 181 observations and 21 variables. It contains numerical variables mostly such as impressions, engagement, retweets, replies, clicks, follows, etc. The dataset is attached in the Appendix section.

**Analysis**

The initial analysis of twitter data set was performed where the key metrics KPIs were identified and the graphs and charts that will be used to answer the business questions were chosen. The next step is to setup the dashboard with all the information gathered during initial analysis.

The following questions were answered using visualizations in the below dashboard snapshot:

* What are the total tweets and media engagement per tweet?
* Compare average impression rate and engagement rate.
* Compare tweets vs details expand.
* What are the top 10 tweets trending ?
* What is the tweet volume on a weekday basis?

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From the above dashboard, we can infer that,

* A clean layout of various metrics is shown in the dashboard. The key metrics such as total tweet, average impression rate, average engagement rate and media engagement per tweet are given on the left side. Area chart along with dual axis is used to represent the KPIs.
* There is a total of 1,181 tweets posted during the period.
* The average impression rate is 773.3 denoting the number of places where it appeared.
* The average engagement rate is 6.65% denoting the engagements such as replies, retweets, likes, etc. on an average.
* The media engagement per tweet is 52.
* Top 10 tweets categorized by likes, engagements, media engagements, URL clicks, etc. are displayed using a filter. We can see that the elementum lingula tweet had a good reach given the highest number of likes and engagements. A bar chart and line chart on dual axis was used to visualize this tile.
* A Calendar depicting the number of tweets posted throughout the month. When the intensity of the color is more, it shows that the number of tweets on that day is more when compared to other days in that week. We can observe that the maximum number of tweets i.e., 34 tweets were posted by a user on Tuesday (Jun 28). Similarly, we can observe for the other months.
* The tweet volume by weekday is shown using a lollipop chart. We can observe that Tuesday had 239 tweets resulting in maximum number of tweets in that week.
* The tweets vs details expand shows the average details expanded in tweets with the number of tweets that hour. We can observe that the number of details expanded is more at 1 PM.

**Summary**

Thus, a Tableau dashboard has been setup with solutions to the business questions and with all the information gathered during initial analysis.

**References**

[1] Why Data Visualization Is Important. Stark, M. (2020, June 10).  Analytiks. <https://analytiks.co/importance-of-data-visualization/>

**Appendix**

The social media dataset and the twitter dashboard are attached below:

