ALY 6070:

COMMUNICATION AND VISUALIZATION FOR DATA ANALYTICS

Assignment 4:

Tableau Representation on Crypto Analysis

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Problem

Plot different graphs (at least 3) based on 5 features from your dataset in Tableau and make the graphs as informative, decluttered, and non-distractive as possible. Upload your report including the screenshots and your explanations.

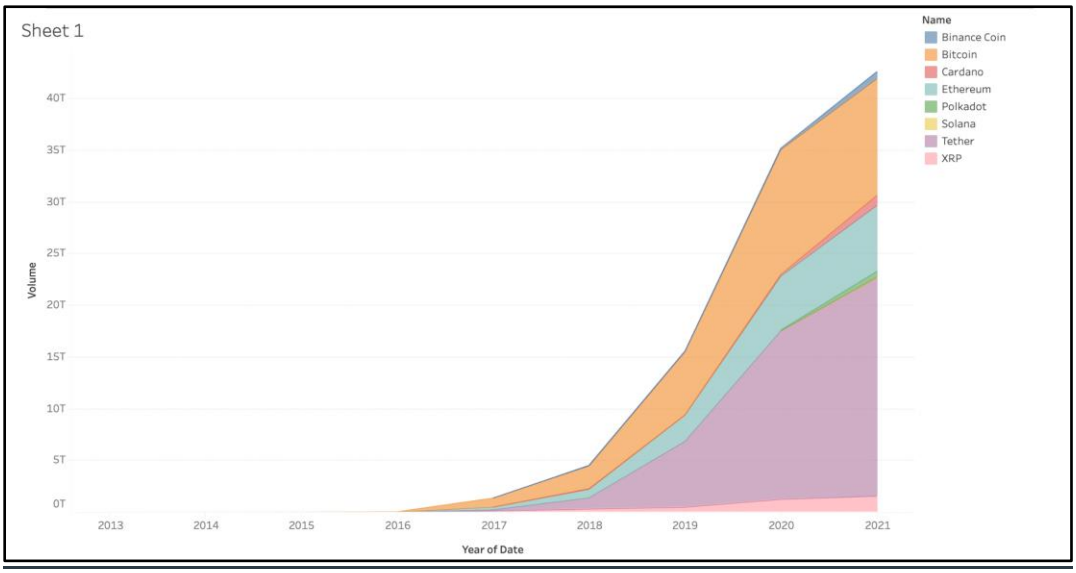
Abstract

This project aims to showcase the use of Tableau in visualizing datasets by creating informative, non-distractive, and decluttered graphs based on five selected features. At least three different types of graphs were produced, highlighting various relationships between the selected features. The report includes screenshots of the created graphs and a detailed explanation of each graph's significance. Through this project, readers can understand the benefits of using Tableau in data visualization and learn how to create visually appealing and informative graphs.

Introduction

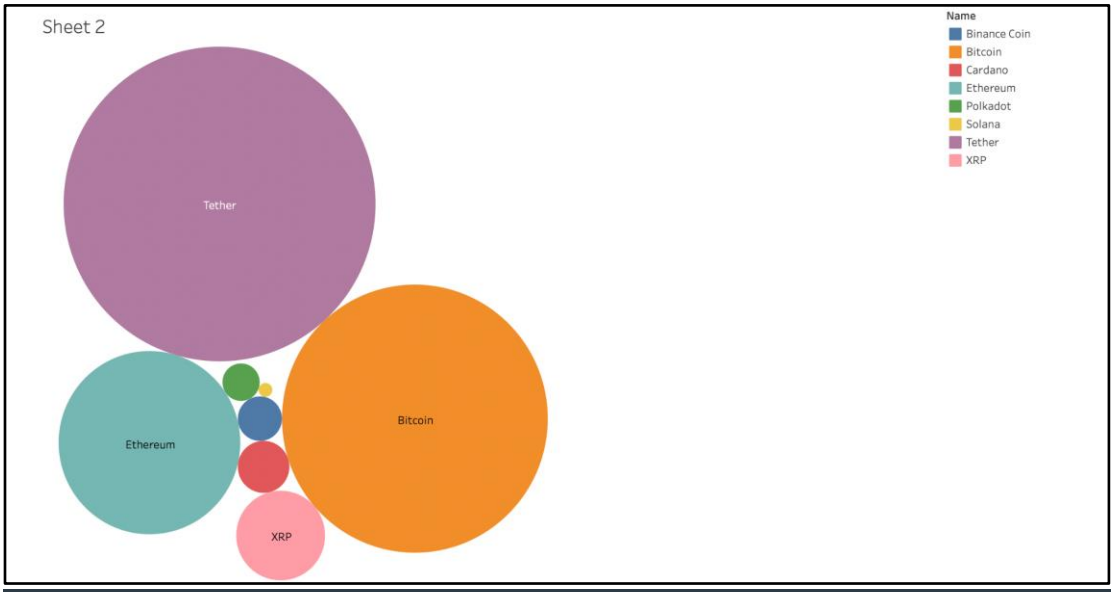
Data visualization is an essential tool for data analysis as it enables one to gain insights from complex data sets. Graphs and charts are the most common forms of visualizations used in data analysis. They help to identify trends, patterns, and outliers that would not be apparent in raw data. Tableau is a popular data visualization tool that allows users to create informative and interactive graphs and charts quickly. In this project, we will explore the use of Tableau in creating visually appealing, decluttered, and informative graphs based on five selected features from a given dataset. The objective is to produce at least three different types of graphs and explain their significance in understanding the relationships between the selected features. Through this project, readers can learn how to use Tableau for data visualization and gain insights into the importance of effective data visualization in data analysis.

Graph 1



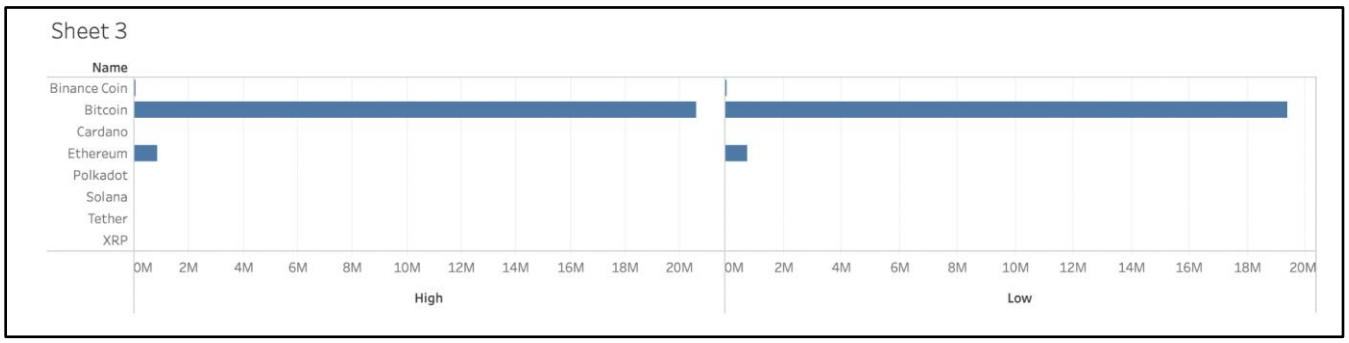
- The following Are Chart shows the volume of Crypto Transactions vs the year the transaction was involved in for a Crypto Portfolio.
- Since we have data that is beginning from 2016, the years before that show no volume in transactions.
- As you can see, the graph shows different volumes of Crypto in a portfolio with XRP being the lowest in volume and Binance Coin being the highest.
- The order of the Crypto holding can be easily seen in the above graph since they have been segregated through different colors.

Graph 2



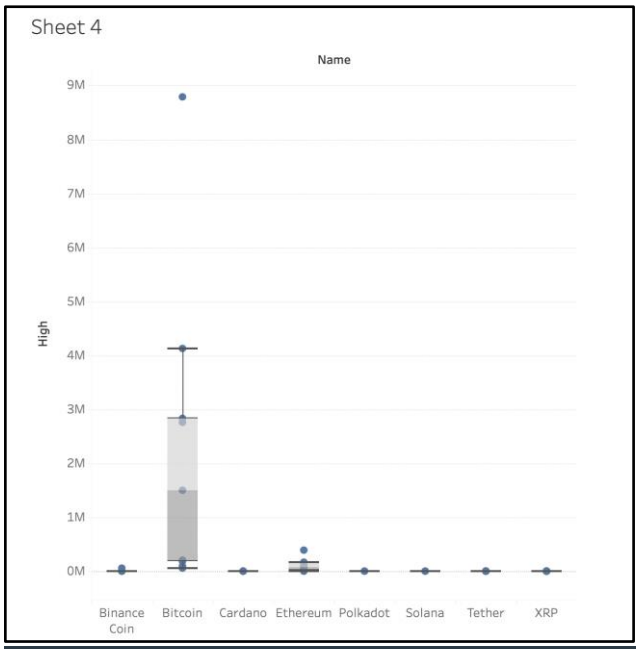
- The following graph is a Packed Bubble that shows the frequency of the data.
- As we can see in the above bubble, Tether shows the highest area of circle, hence we can conclude that Tether was the most frequent transaction in our portfolio.
- Following it, we can see Bitcoin and Ethereum as the second and third most frequent crypto currency that was a part of the transaction.
- The smallest bubble is of Solana, which shows that despite being traded more in value than XRP, it didn't undergo a transaction multiple time.
- This can also show that Tether was the most traded Crypto in our portfolio.

Graph 3



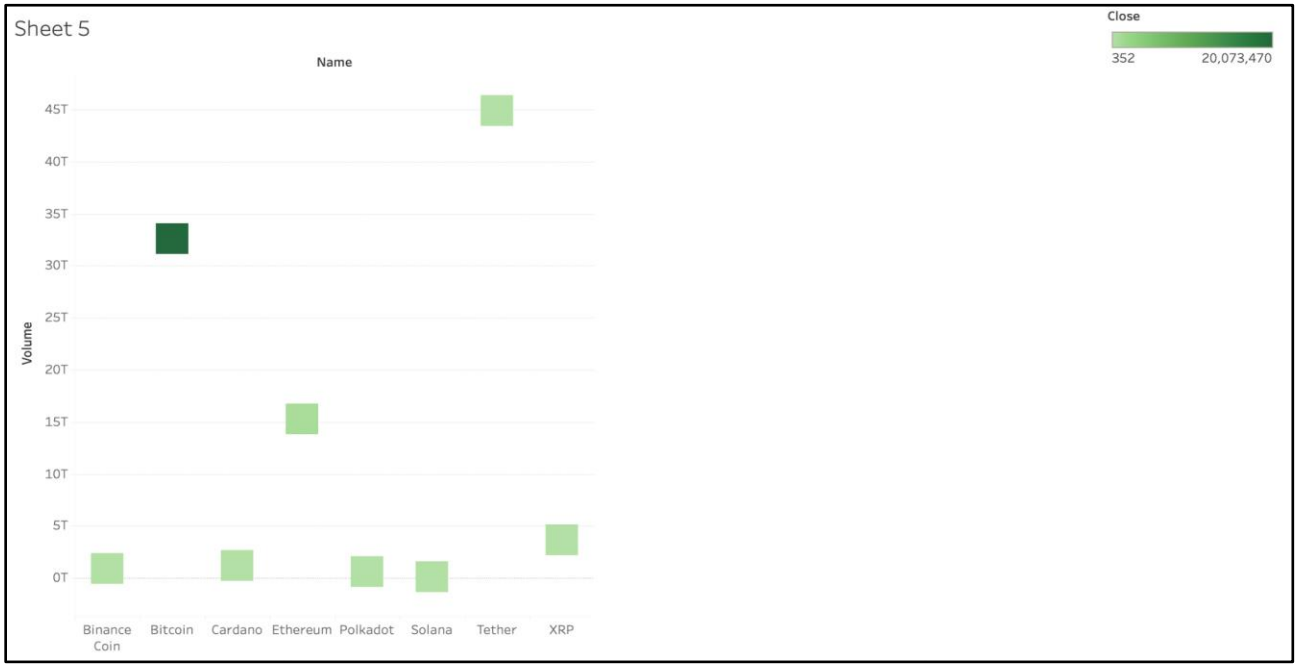
- The following is a Horizontal Bar Graph which shows its value in millions during two phases of market, when the market value was high and when the market value was low.
- We can observe that Bitcoin was the most valued crypto in our portfolio whose value was estimated somewhere to be above $ 20 Million at its high and approximately $ 19 Million when it was low.
- Following this was Ethereum whose value was much lower as compared to Bitcoin.
- Ethereum at its high peaked at approximately $ 1 Million and it had almost the same value when its market was low indicating more stability.

Graph 4



- The following graph is known as Box and Whisker Plot
- It is mainly used to detect anomalies or outliers in our dataset.
- When any value falls outside of our box which shows the variance, it is considered as an outlier.
- In this chart, we can see two outliers in Bitcoin and Ethereum respectively.

Graph 5



- The following chart is a Heat Map that shows the Value of Crypto Transaction based on its volume vs the Crypto that was being traded.
- The light green color shows that the number of transactions was low as compared to the average number of transactions.
- Dark Green color shows that the volume of transactions was high as compared to the average number of transactions.
- As we can see in the chart above, Bitcoin shows the darkest color, despite being less in volume than Tether. This shows that despite Bitcoin being less in volume, its value was high.
- We have also created a legend to give an estimate of the value of our Portfolio based on different Crypto currency.

References

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