EQUITY SALES VISUALISATION USING QLIK SENSE

DATA VISUALISATION

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Data visualization is viewed by many disciplines it is considered as the modern equivalent of visual communication it involves the creation and study of the visual representation of data meaning information that has been abstracted in some schematic form including attributes are variables for the units of information a primary goal of data visualization is to communicate the information clearly and efficiently via statistical graphics plots so that the information can be gained, it helps the users to analyse and reason about data and evidence it makes complex data more accessible understandable. The key point is presenting the data in the form a pictures or graphs so it helps users and decision makers to find out the new pattern in their respected business by presenting the data in a visual form they can easily grab the difficult concepts and good decisions can be made.

ABSTRACT

"In good information visualization, there are no rules, no guidelines, no templates, no standard technologies, no stylebooks you must simply do whatever it takes" it's a famous quote by Edward tufte about the data visualization data production has been increased in day to day life every single data will have millions of hidden information by using the effective data visualization tools we can derive them and it can be used to find the pros and cons from that the companies can be improvised in many aspects. In this paper, I am presenting the equity sales from the various parts of the world.

Keywords- equity sales, data visualization.

INTRODUCTION

Equity sales it generally refers to the sale of a company here the context will be different selling a company it means the shares of a company will be trade instead of the original assets once the equity sales occurred the ownerships of the companies will be changed and the companies structure remains constant. The usage of revenue In this particular field is comparatively high when compared to the other fields the sales manager, sales person they play a major role in this department so here I have used the data visualisation to find the out the hidden information in the data .nowadays the investments in the share markets and the share trading between the companies have been increased to help the investors I have visualised and analysed the equity sales datasets for the three different years so it would help in the better understanding of the investors, sales managers, sales persons and their respected clients, the money rolled in this field etc. so it would be help full the investors to find out the best sales managers and how well they can do equity sales in terms of profit .the data visualisation in equity sales will be more helpful for the users they can have a brief idea about this field.

BACKGROUND

The aim of this project is to visualize and analyze the entire equity sales for the years 2007, 2009 and 2011. Dataset consists of the revenue, investor details and every other field respected to the equity sales. As everyone will be aware that the equity sales is all about trading the shares of a company so comparatively, it means that the role of the money will be more. From the investors point they need to get more profit on the equity sales in the perspective of the sales manager they need to get more

commission so that they need to know which industry or a sector provides the more commission so the key points are the investors, sales managers, sales person, industry and the type of sector at the end it automatically leads to the share market, it has the two phases either it will be a secular bull market or it will be a secular bear market.

Secular bull market- 1920,1950 and early 60

Secular bear market- 1930,1970, and 2000

So by analyzing the data we can help them to make out better decisions for the everyone's profit.
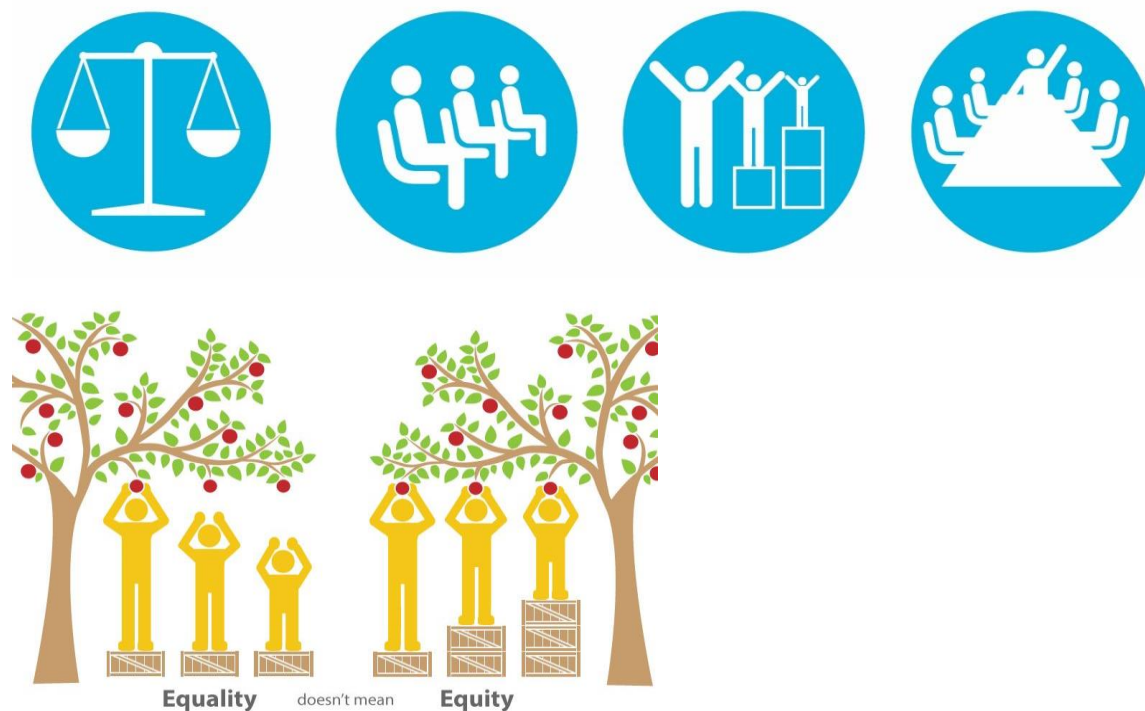
GENERAL VIEW OF EQUITY

HARDWARE AND SOFTWARE REQUIREMENTS

Operating System: Windows 10

RAM: 16 GB

Tools: Microsoft excel 2016, Qlik Sense Desktop 11.11.**1**

DATA COLLECTION

The dataset is taken from the Kaggle and the Qlik community and they are connected by using the unique id. To use the full data for data visualization we need to understand the data for an effective visualization. null data's, duplicate values should be removed. It can be done using the google refine or it can be rectified in quick sense script editor which is most efficient and faster way .as the size of the data is more they have converted the excel sheet into an. qvd format. the usage. and is it helps to reduce the size of the data so that the data can be loaded easily.

VISUALISATION TOOL – QLIK SENSE

It's one of the self-serviced data visualization tools it's mainly designed for the individuals and collaborations. it helps the users the explore the data deeply and helps to found out the answers for the business queries. The version I am using here is 11.11.1. qlik sense follows in-memory concept which is faster compared to other reporting tools.

RULES FOR DATA VISUALISATION

- **MAKE SURE THAT VISUALISATION ANSWERS A QUESTION**
- **USING THE RIGHT METHOD OF VISUALISATION**
- **THE GRAPHS AND IMAGES SHOULD BE UNDERSTANDABLE**
- **VISUALISATION USED SHOULD MEET BUSINESS CRITERIA**
- **USING THE CLEAR FONTS**
- **PUT IT ALLTOGETHER**

DATASET DESCRIPTION

The dataset consists of three tables trade, commission, and calendar the attributes of the table are given below. The format of the dataset is. qvd the advantage of this format it helps to reduce the data size and the data can be loaded quickly than the other formats. To preview the dataset, we can convert the qvd format to excel or while loading the data set we can see the attributes. To connect these tables, we need a unique id field to connect between the tables so the tables are interrelated. Only if the tables are connected we can fetch the data from the other respected tables.
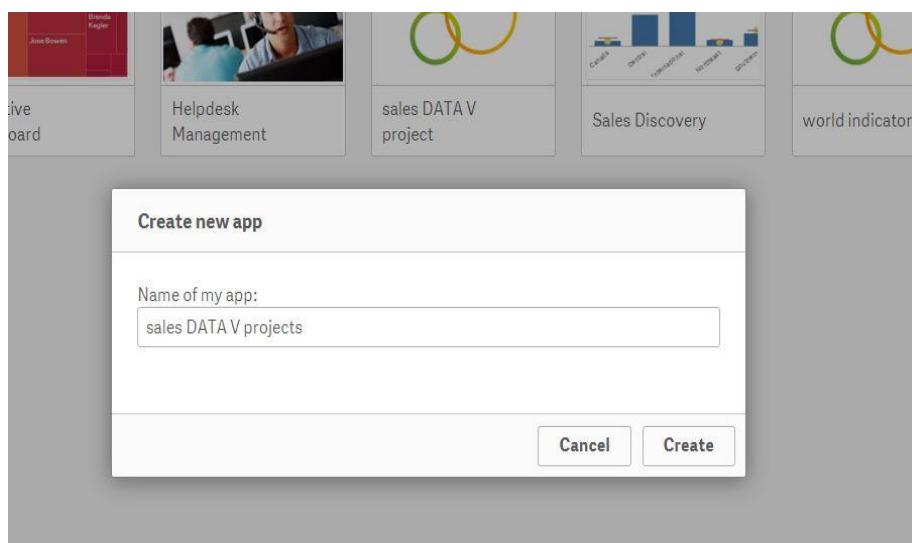
VISUALISATION PROCESS

The entire process explained clearly in the below passages

DATA LOADING

The downloaded dataset should be loaded to the Qlik sense using script editor.

1.Create a new app

2.open the script editor and create a connection to the folder where the data is placed. Load the data and then edit the script if necessary so that the data model is created properly. We should make sure that the data is loaded without any errors or synthetic keys. If there are any synthetic keys then there is a possibility to get redundant data.
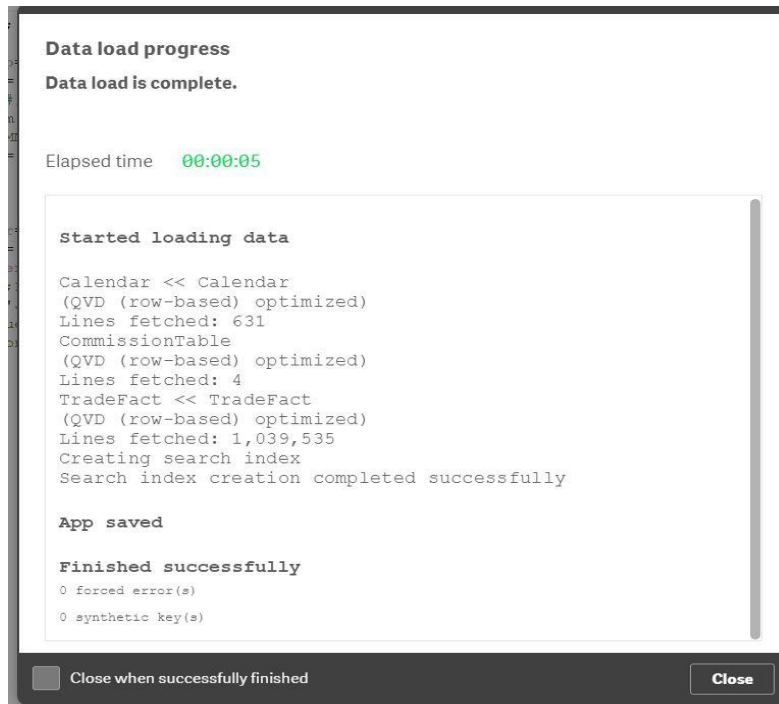
DATA MODELLING

The data modeling gives the overview of a dataset and shows how they are interlinked between the tables. In our scenario, the below image shows the data model that is been used in our project.
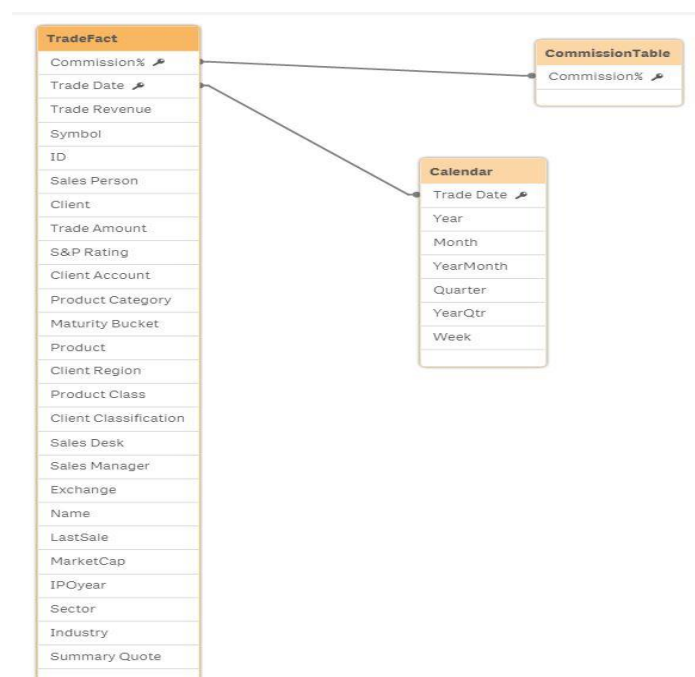
We can preview the data in each and every table from the data model itself.

CREATION OF DASHBOARDS

Every dashboard will visually represent the solution to the business queries in various graphs so according to the BI queries the dimensions and measures should be added.

BUSINESS QUERY 1: how is the revenue spread across various clients and regions, what's their last sale?

REVENUE DETAILS

OVERVIEW OF REVENUE DETAILS DASHBOARD

The above image shows that it's a dashboard consist of the revenue details of a company for the three different years it shows the total revenue, average market cap, and the last sale value. These can be filtered by using various tabs which are shown on the image.

It contains three sections

- Filter pane- where it contains important where we can filter the data.
- Key performance index(KPI)- it shows the values of important data.
- Charts- various types of charts are used to meet business criteria.

BAR GRAPH represents the revenue obtained by the clients.

DIMENSION- CLIENT

MEASURE-AVERAGE REVENUE

The average revenue is calculated using the function average it's an in-build function so that it will help full to obtain some mathematical functions.

Ventana is the client whose revenue is more when compared to the other clients.
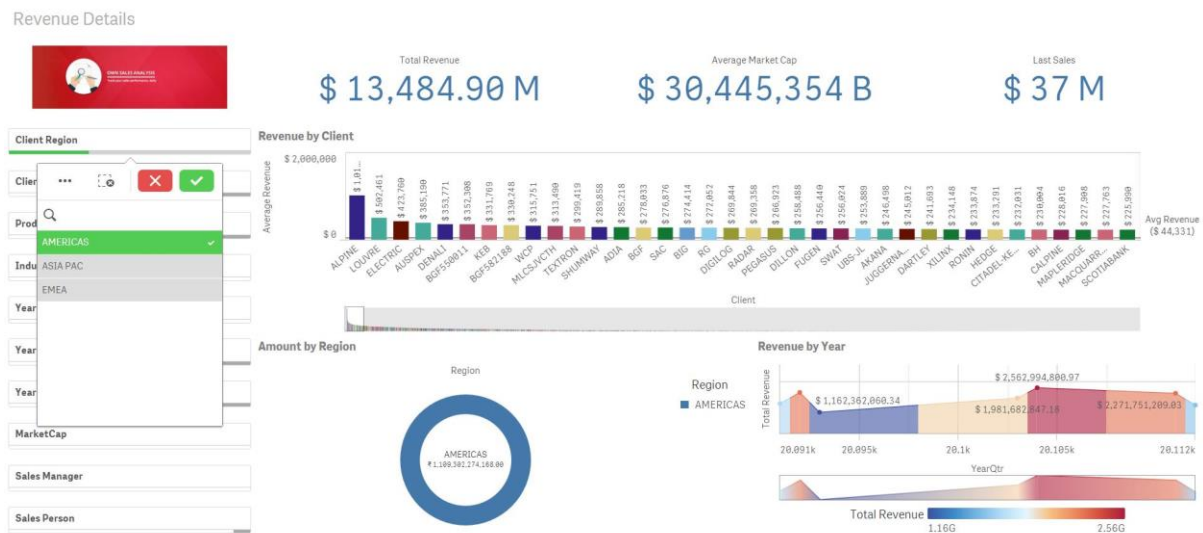
OVERVIEW OF AMERICAS REVENUE – FILTERING BY USERS NEED

The users can filter as they required I have filtered using the client region now the dashboard display the America's total revenue and the American client's revenue, last sale value, their market cap. if u need it for the company we can also see that by using the function called filtering.
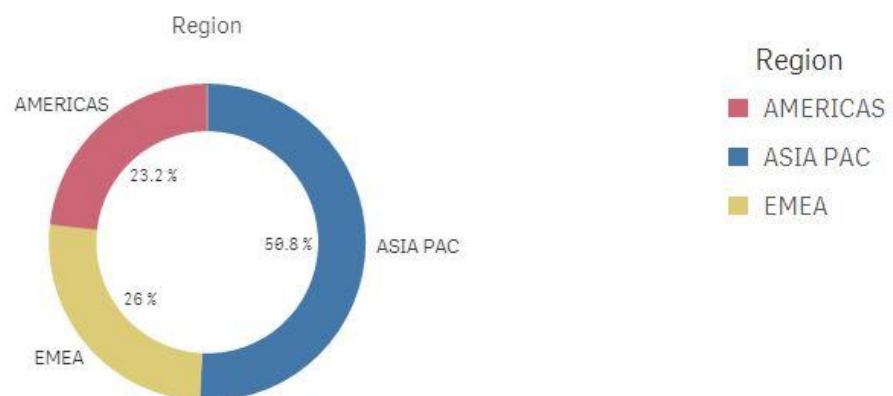
OVERVIEW OF REVENUE ACROSS VARIOUS REGIONS

It's a type of pie chart the called donut the dimension used here is region and the measure is revenue when comparing the different continents on the basis revenue the Asian countries have more revenue when compared to the Americas and the emea.

TABULAR VIEW OF REVENUE DETAILS

If any customer needs to filter and export the data into a pdf or excel then this dashboard will helps you to do it. By selecting the filter and converting into respected formats as they needed.

converting into pdf

CONVERTING THE DASHBOARD INTO EXCEL OR PDF OR IMAGE

BUSINESS QUERY 2: what is sales commission and sales revenue for the sales managers and sales person?

sales person

OVERVIEW OF SALES PERSON DASHBOARD

This dashboard shows the sales commission percentage and their sales revenue for all the sales managers and sales persons. The sales commission is about 0.96% the

tree graph shows the sales manager trade amount which means their revenue

scattered plots show the sales person revenue the bar chart

bar graph shows the average quarterly year revenue for sales person and manger and the triangle inside the bar chart shows the count for the sales.
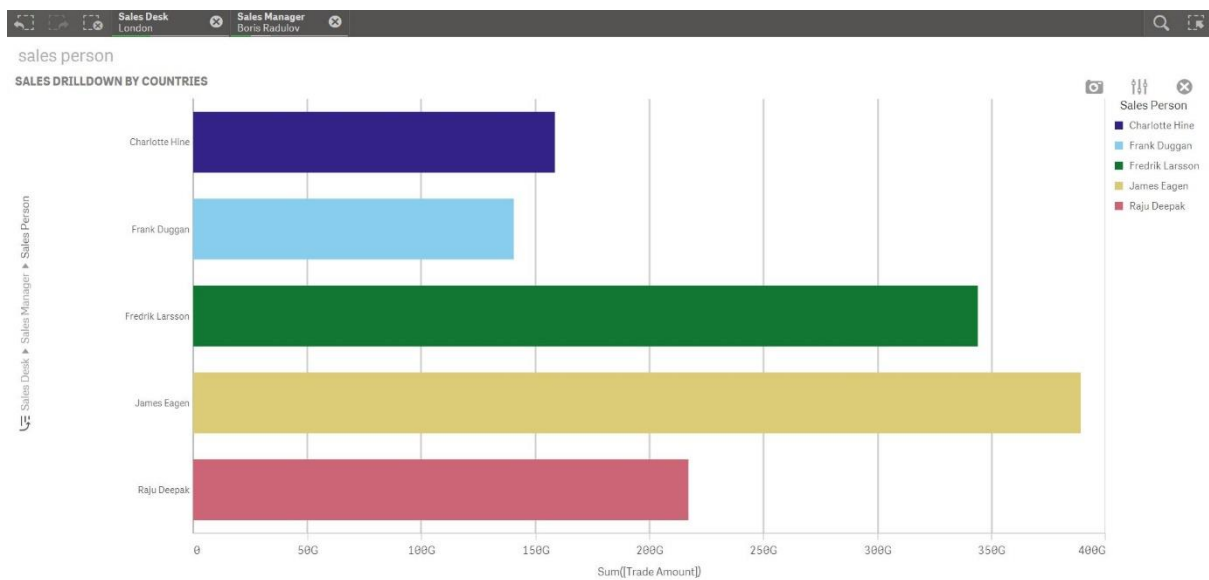
SALES DRILLDOWN BY COUNTRIES

OVERVIEW OF DRILLDOWN CHART

This chart is drilldown chart where it contains three types of dimensions.

DRILLDOWN LEVELS

Sales desk -sales manager-sales person

This chart shows the sales revenue of above three levels this can be done by clicking on a value which will take us to the next drilling level


OVERVIEW OF DRILLDOWN

From this chart, we can see that in London under sales manager Boris Radulov, James Eagen is the sales man who is getting more revenue. So, in London companies can trust them to invest the money so the companies, as well as the sales person and the sales manager, can also get the profit.

Likewise, each and every country will have the best sales person and sales manager.

BUSSINESS QUERY 3: what's the last sale and the average trade amount of an industry?
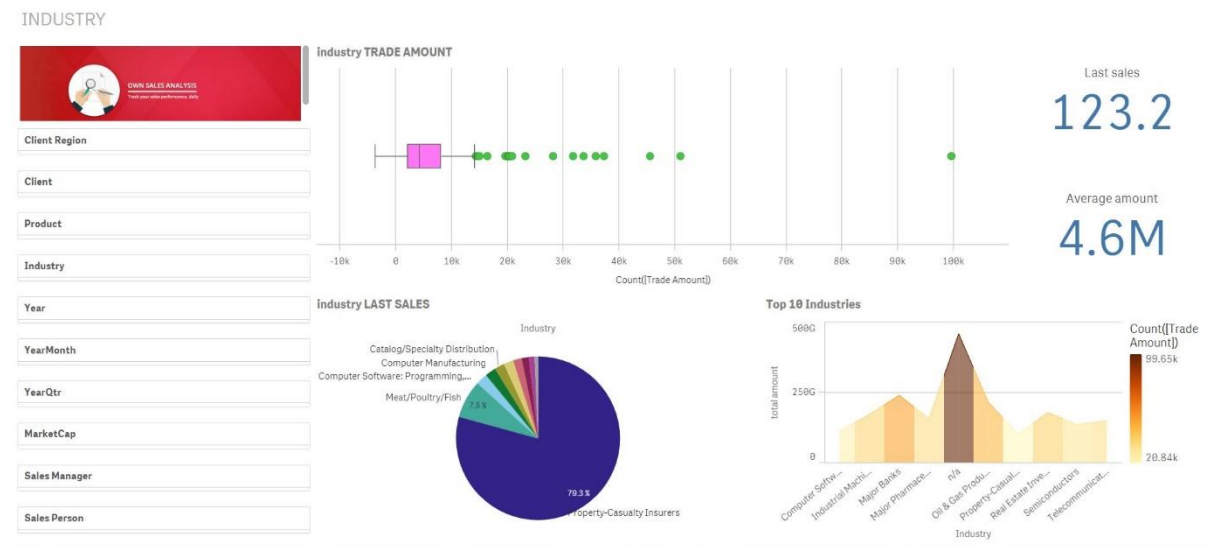

OVERVIEW OF INDUSTRY DASHBOARD

This dashboard shows the industry dashboard here I have found the last sales for a company and overall last sale and the average trade amount invested by a company.

The box plot shows the overall industry trade amount.

The pie chart shows the which types are industry is invested more.

The key performance shows the overall last values and the average trading amount.

**FOR SPECIFIC INDUSTRY AND COMPANY**
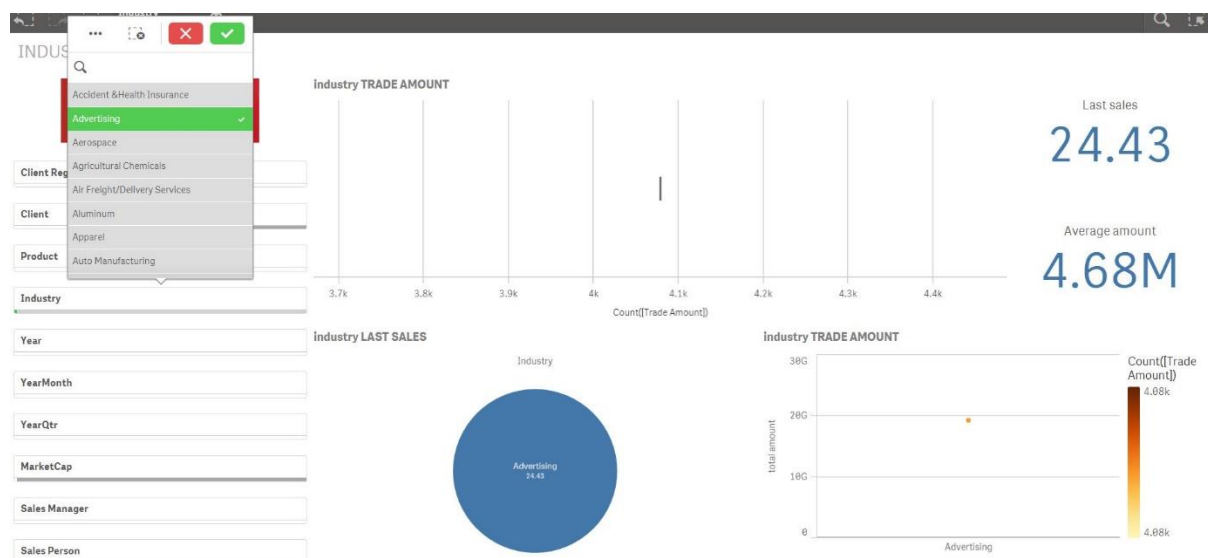
Here you can see that by using filtering pane I have categorized it for only advertising industry so that you can see the last sale is about 24.43 million and the average trade amount is about 4.38 million.

By this, you can filter for a particular industry, a particular company, specific region etc.

BUSINESS QUERY 4: how's the revenue and sales based on the years and months?
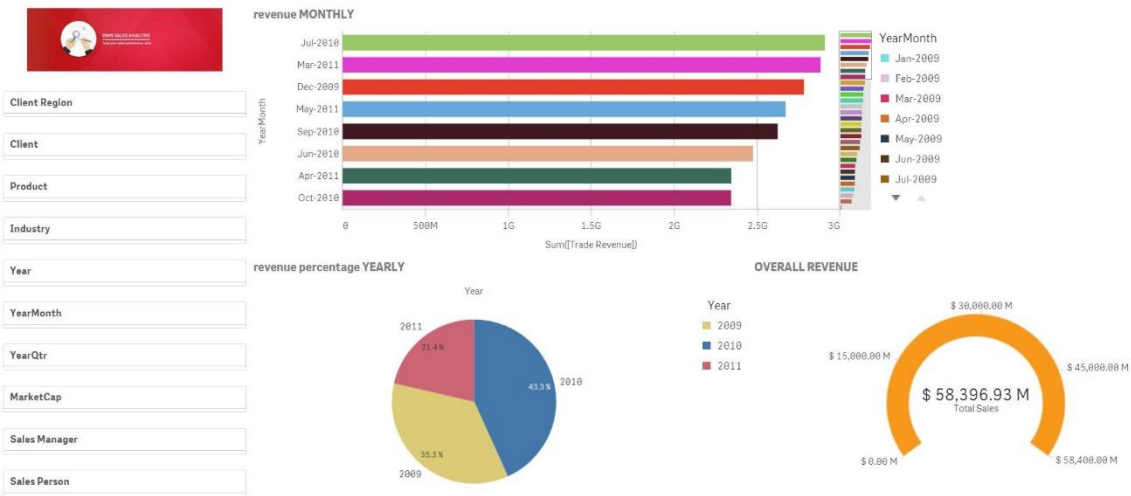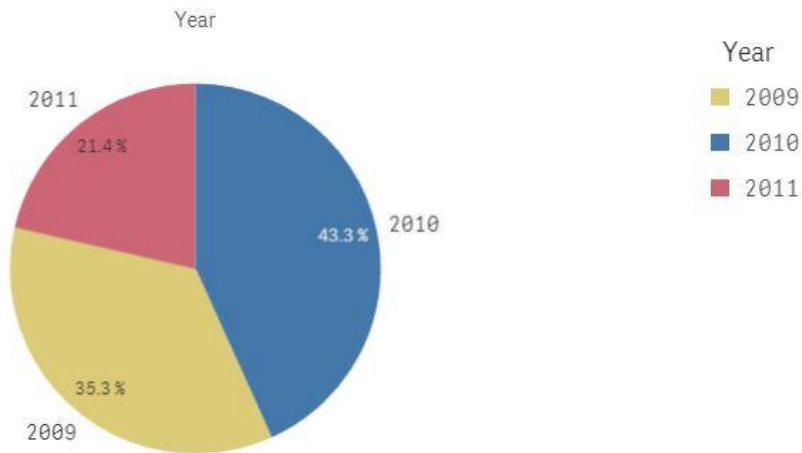

OVERVIEW OF EARLY AND MONTHLY REVENUE

This dashboard shows the yearly revenue with their respected months the bar chart shows the for the year 2009 the month wise revenue is listed.

below that the gauge represents the total revenue for the whole three years if the user needs to see for the particular year they can do it in filter pane .


The pie chart shows the yearly revenue by comparing the three years it is clear that 2010 has the more revenue but the upcoming is not much as excepted so it will cause some effect so the investors will have different opinion they will have the less confidence so at the time the sales manager and the sales person they will not have much commission as they expected.

**BUSINESS QUERY 5: which industry does the more equity sales?**
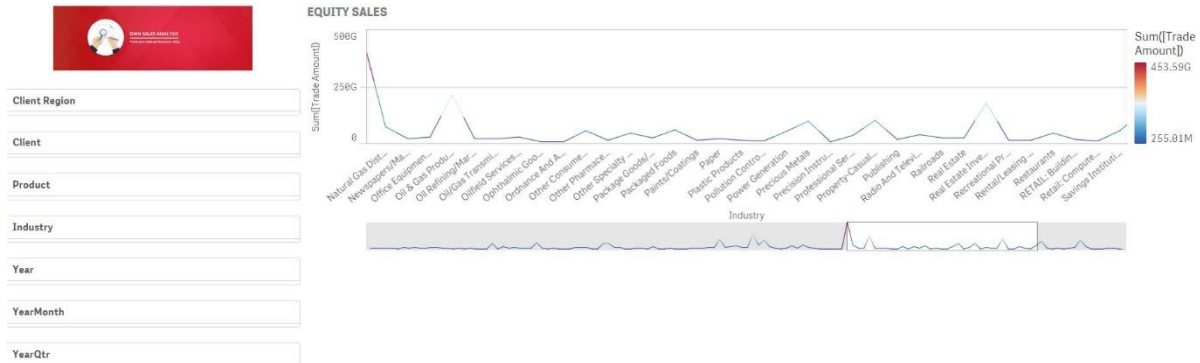
OVERVIEW OF EQUITY SALES

From this dashboard, it is clear that the industries related to the oil and gas and the industries related to the real estate have done more equity sales in the year 2009,2010 and 2011. so the sales managers would approach more on this types of industry the percentage of getting off more commission is high and the investments will be in a larger scale.

BUSINESS QUERY 6: which company invest more on equity sales?
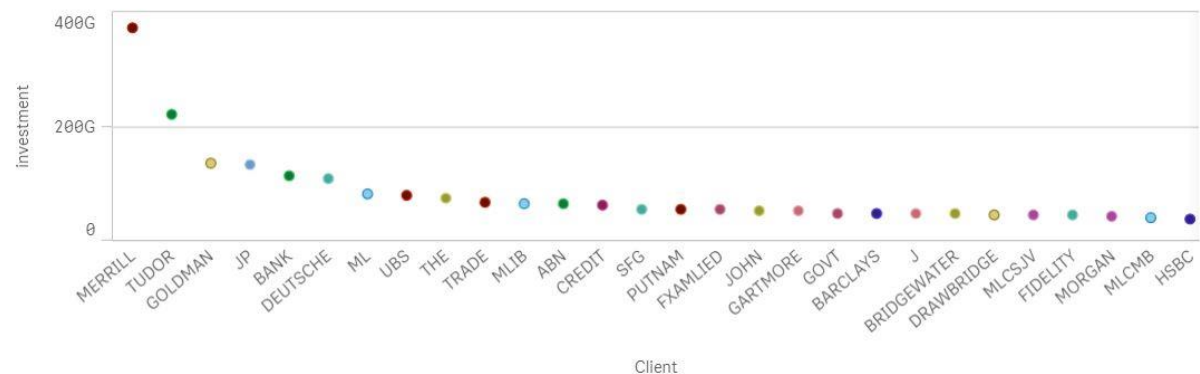
It's a box plot here I have taken the clients as a dimension and their investments as measure by comparing Merril is the client whose investment seems to be more.

CONCLUSION

The above all visualised data could give the details of equity sales for the consecutive years 2009,2010 and 2011 so by this given graphs the industry which means client will have a clear idea about equity sales on which sales manager could they invest on par as the sales team will also have an idea about the commission and which type of area can they target. Visualizing the equity sales will make a big impact on the upcoming years so by visualizing the data the investors and the sales team will have a clear idea where both the sides can make profits.

RELATED WORKS

The above charts presented are the simple examples the how well the equity sales can be visualized using data visualization tools the data can be used in machine learning to predict the prices so predicting prices using different ML algorithms would be better for the investors and the sales person.

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