Data Visualization on Movies Dataset using Tableau

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Abstract

Data visualization is enthusiastically embraced by organizations like never before. Organizations that now know and understand its impact, like its usage. Since Big Data is a popular and successful terminology in today's technology world in industries ranging from finance to communications, it is necessary to make better business decisions. Organizations that actually know it and understand it, absolutely love it. Since Big Data is a popular lingo in today's technology world and in industries ranging from finance to communications, it is essential to make better business strategic decisions. As a result, organizations are looking for better data visualisation tools and knowledge to make their essential information load easier to understand. This paper presents some such insights in using Tableau to perform data visualization. Thus, it becomes easy for people to understand the data under consideration.

Keywords - *data visualization, movies, tableau.*

I. INTRODUCTION

Many branches of science view data visualization as a typical modern business communication equivalent. The visual representation of information is created and actually studied.

Tableau is a powerful and effective and largest growing tool in the business intelligence, business analytics and data analysis industry for effective data visualization. It helps to simplify raw data into a new format which is very easily understandable and easy to grasp too. It helps to simplify raw data into a format which is very simple to understand.

II. WHAT IS DATA VISUALIZATION?

Data Visualization – The graphical representation of data and information is the visualization of data. Data visualization tools and techniques provide an accessible way to see and understand data trends, outlines and patterns by using visual elements such as charts, graphs and maps.

III.NEED FOR DATA VISUALIZATION

Business intelligence developers and data analysis applications are progressively using the advanced data visualization technology to deal with large volumes of data that help information employees interpret analytical results more effectively. Data are being constantly bombarded on companies these days and therefore it is necessary to convert them into excellently intelligent business decisions. Although most traditional business intelligence tools are clearly aimed at market analysts or a few decision - makers, data visualization is seen as a way to make business analytics available to a wider audience. Companies are therefore directly competing to develop a better, faster data visualization tools and generally expect data visualization to be the magic bridge for tackling Big Data.

IV. ADVANTAGES AND BENEFITS OF GOOD DATA VISUALIZATION

The following are the reasons why decision makers and organizations use data visualization: -

A. Enhanced Assimilation of Business Information
B. Quick Access to Relevant Business Insights
C. Better Understanding of Operational & Business Activities
D. Rapid Identification of Latest Trends
E. Accurate Customer Sentiment Analysis
F. Direct Interaction with Data
G. Predictive Sales Analysis
H. Drill-Down Sales Analysis
I. Easy Comprehension of Data
J. Customized Data-Visualization

V. SOURCE OF DATA

For this experiment, secondary data relating to movies was collected for movies released on or before July 2017. These files contain metadata i.e. detailed data about the main data for all the thousands of movies listed in the MovieLens Dataset.

VI.RESULTS

We can create visualizations to find the longest running movie times. Figure 1 illustrates this. It sorts the data based on the runtime of the movie and displays top results required by the user. It displays the results sorted in descending order.

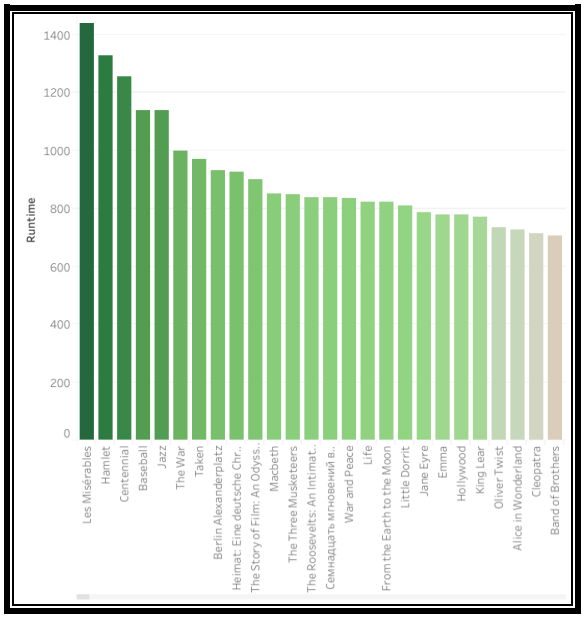

Fig. 1 Movie by Runtime sorted in descending order.

We can obtain the results for revenue per year. Figure 2 illustrates the revenue per year in its charts. It sorts the data in descending order again and displays the year and the revenue obtained in that year.

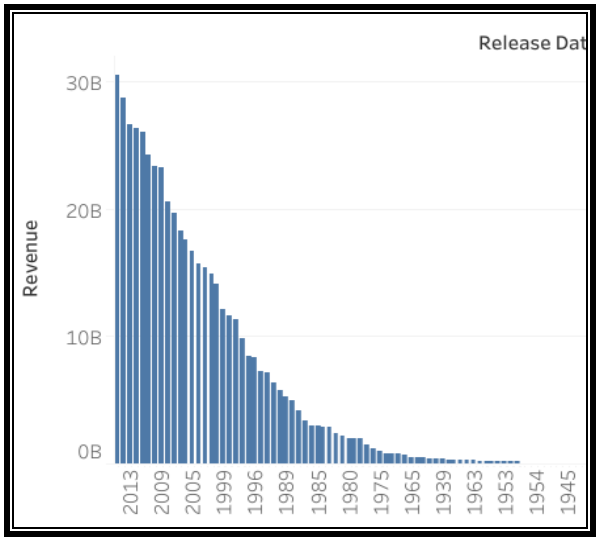

Fig. 2 Revenue per year.

Next, we can also obtain budget per year. It displays the results in the bubbled shape chart. If a year has more budget value as compared to another year, then the one (year) with the greater value will be displayed in bigger bubbles as compared to the another one. Figure 3 displays the graph for budget each year.

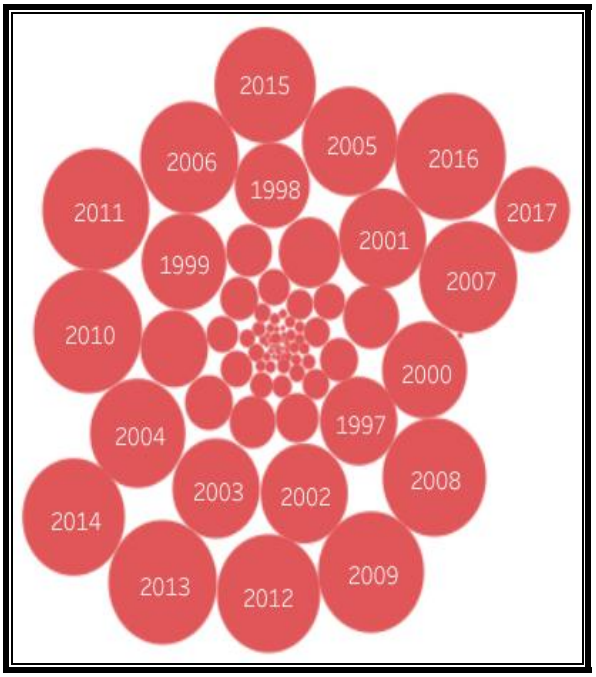

Fig. 3 Budget per year.

Apart from calculating the budget for a particular year, we can also get insights for the budget assigned to each movie. This is also displayed in sorted descending order so that the movie with the highest budget is displayed first. Figure 4 displays the graph for budget each year.

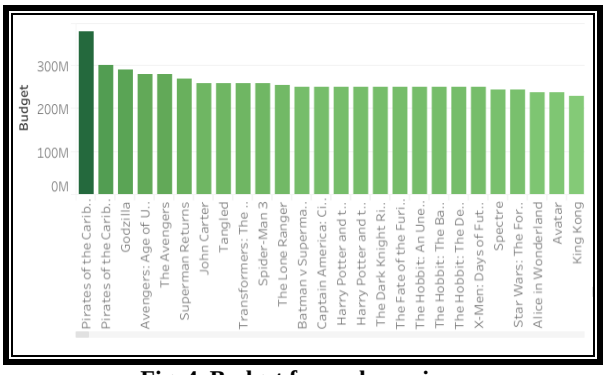

Fig. 4 Budget for each movie.

Apart from showing individual graphs for each feature, we can also construct charts such as butterfly chart which can show corresponding values for both the features at the same time. Figure 5 displays the same for each corresponding movie name. It displays the vote average on the left and the vote count on the right for each movie.

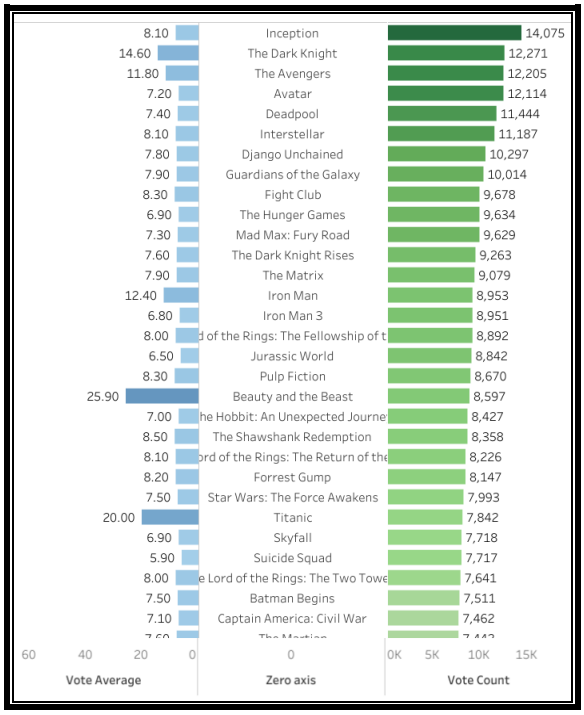

Fig. 5 Revenue and Budget for movies.

VII. CONCLUSIONS

Useful insights have been obtained using Tableau as data visualization tool. The charts generated encourage the managers and other decision makers to have a glance of data at a single view thus helping them in the decision making.

VIII. FUTURE ENHANCEMENT

Various other types of charts or graphs can be built using Tableau thus providing more help to the customers and managers.

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