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Subject: Big Data

Summary of project

I have created a visualization for sales data with the help of the power bi tool which helps me to analyze the data and finding insights. The Focus, of my project, is to learn various functionality of power BI and using that to build a dashboard. In this project, I have learned many functionalities of power bi like DAX functions like Date and time functions, mathematical functions, KPI dashboard, query editor, a visualization tool, etc. I t has a total of three elements which are power bi desktop, service, and mobile apps. There are various ways to import the data into power bi. Import feature of power bi is it is a great data compression tool as it compresses the data files in a very small size by compressing in-memory cache for optimized query performance.

In this project, I have selected the database of a company named adventure cycle works which is a large, fictitious, and multinational manufacturing company and I found out the important relationship between the data like maximum sales by product, yearly percentage, comparison of profit from last year to this year. The problem with this company's data is, it is so messy and that has several problems like the user reports are ambiguously targeted and it is not easily read which data and information to display. I used the power bi query editor to clean the data of 9 different tables and only took the columns which are necessary for the analysis.

In the visualization engine, I created a dashboard with the help of slicers, tree-map, stacked graph, 100% stacked graph, area chart, line chart, cluster bar graph, table, and simple bar graph. From the visualization, I have some insights of sales data like most of the profit comes from north America other than that overall sales are not much affected by gender as they share same statistics in mostly all-region. There is a big profit difference in the sales sales amount of 2012 and 2013 as sales amount in 2014 is more than doubled than sales in 2012 which is a great sign for the company. Moreover, it is noticeably seen that as the distance increase from the store to customer residence the amount of sales is decreasing which indicates that people are trying to purchase items within the range of 0-5 miles after that they may look for a substitute. For all the categories, Black and red is the prime choice for all the consumers which had the sales of 50% from all colors. In the month of January 2014, the company saw a sudden drop in sales which was -1777%. So they are many interesting finding that I got in the analysis and company can work on how to improve the sales with this findings. It also allows us to ask natural language question and power bi gives the answer in the form of visual

Power bi also provides to publish the reports online and we can also create the application of our dashboard. Further, it allows us to share reports with other people and on websites for the public also. In future work, I am going to build a dashboard for real-time data analysis.