Christopher Anderson
Professor Kern
March 17, 2020

DSC 630 Predictive Analytics

Assignment 2.1: Visualizing Data

Introduction

This paper will offer a brief summary of the role that visualizing data has in predictive analytics. It will list some of the pros and cons of visualizing data, and will describe a few different methods to visualize data and why some are more beneficial than others.

Visualizing Data in Predictive Analytics

We are visual creatures. Look no further than the fact that there were pictures before the formal, written language. Primitive sketches brought together thoughts, plans and history. When something is too difficult to comprehend, resorting to this uncomplicated language of data visualization (usually expressed in some type of graph or chart) often simplifies everything you can grasp into a description. At its core, data visualization brings complicated data into a graphical format, helping you to grasp your business environment more easily and to find trends that help your effective strategies. Data visualization is really the perfect storm for my passions: data and design.

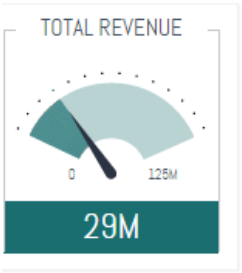
“To create architecture is to put in order. Put what in order? Function and objects.” – Le Corbusier

Le Corbusier was among 20th century's greatest architects. He understood intuitively how to simplify it to its simplest and most elegant form without ever losing what matters most: the meaning of each creation and how people communicate with the space around them. Visualization of data is very much like architecture. When figuring out how to show data, you need to start with the feature — the trend, pattern, or essential piece of information you're trying to provide at a glance — then consider the user/audience and how they're accessing and interacting with the data; only then can we get to the final step: making it as clean and beautiful as you can.

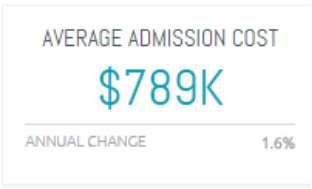
Different Ways to Visualize Data

There are many great ways to visualize data, and I will keep things brief by summarizing a few of them as follows.

Indicators: Show one piece of information clearly



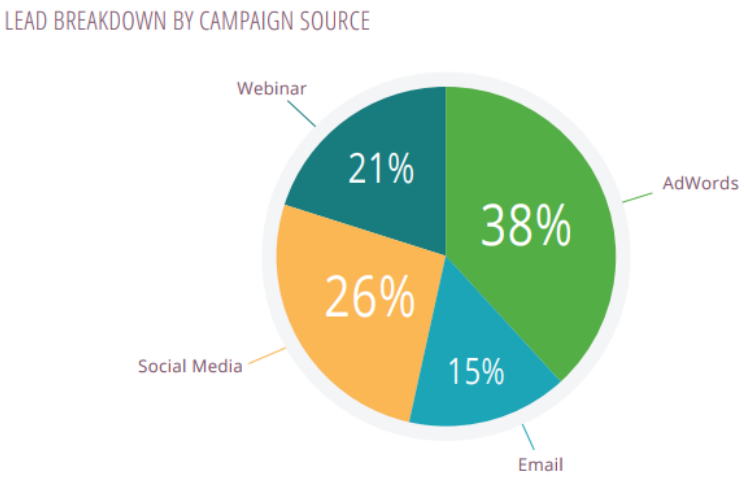
Gauge Indicator



Numeric Indicator

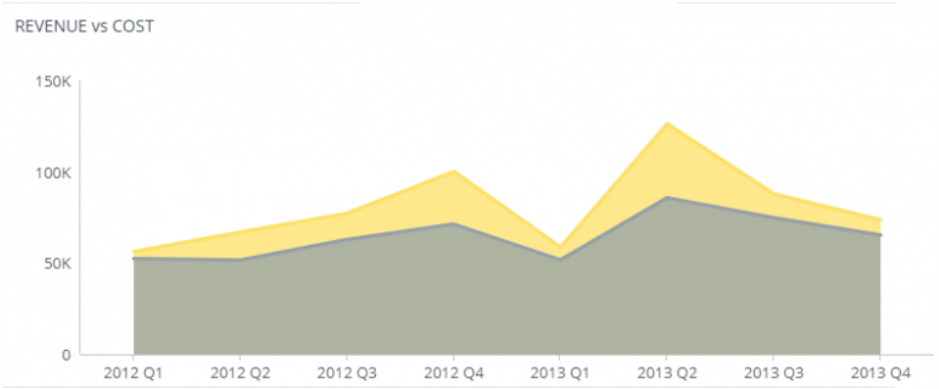
These are particularly useful when you want to give an instant idea of how well a business is doing in a particular area, such as sales.

Pie Charts: Used to show clear proportions



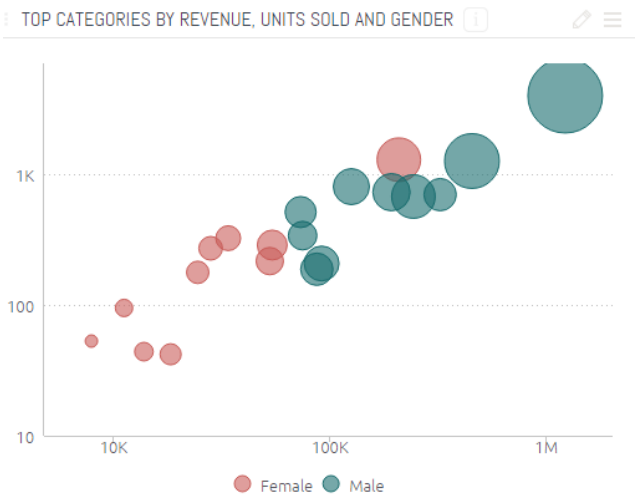
Pie charts easily are a great way to show the share of each value of the whole. They are far more intuitive than simply listing percentages that add up to 100%.

Area Charts: Compare proportions



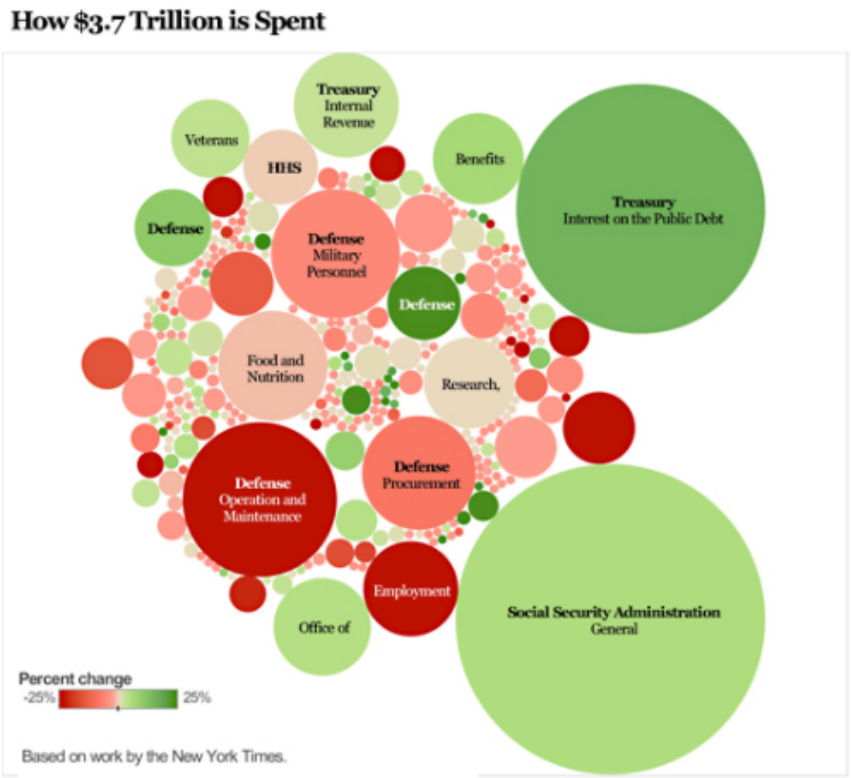
Area charts are useful because they give a sense of the total volume as well as the proportion of each category.

Scatter Charts: Distribution and relationships



Scatter charts present categories of data by circle color and volume of data by circle size; they are used to visualize the distribution and the relationship between the two variables.

Bubble Charts: Multiple variables



Similar to the scatter charts, the bubble charts show the weight of the values by the circumference size of the circle. However, they differ in that they pack many different values into one small space and only represent a single measurement for each category.

Conclusion

In today's quickly evolving world of information, it is crucial to be able to display that information in a way that engages people and catches their attention. We are drowning in the noise of data, and visualizing data is proving to be a key means of communication and understanding.

Resources

https://www.sisense.com/blog/10-useful-ways-visualize-data-examples/

https://thekinigroup.com/importance-data-visualization/