



A small circular icon with a person silhouette, followed by the text "rishabh-mishra" and a downward arrow indicating a dropdown menu.

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Reading: Understand and Define Simple Data Visualizations and Graph Types

## Reading: Understand and Define Simple Data Visualizations and Graph Types

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So, what is data visualization?

Data visualization is the communication of data in a visual manner. According to Wikipedia, "To communicate information clearly and efficiently, data visualization uses statistical graphics, plots, information graphics, and other tools. Numerical data may be encoded using dots, lines, or bars, to visually communicate a quantitative message."

The goal of data visualization is to make complicated data easy to understand and gain insights from, making the data more useable. So how do you accomplish this?

In his 1983 book *The Visual Display of Quantitative Information*, Edward Tufte writes:

"Excellence in statistical graphics consists of complex ideas communicated with clarity, precision, and efficiency. Graphical displays should:

- show the data

- induce the viewer to think about the substance rather than about methodology, graphic design, the technology of graphic production or something else
- avoid distorting what the data has to say
- present many numbers in a small space
- make large data sets coherent
- encourage the eye to compare different pieces of data
- reveal the data at several levels of detail, from a broad overview to the fine structure
- serve a reasonably clear purpose: description, exploration, tabulation or decoration
- be closely integrated with the statistical and verbal descriptions of a data set."

In essence, the right set of graphics, that follows these principles, will reveal the trends in the data. It is also very important when creating visualizations, to not distort the data in any way. You are trying to represent the data, not skew it.

To achieve these visualization goals, there are many means of portraying data. Some of the most common visualizations used are the column chart, bar chart, line graph, dual-axis chart, area chart, stacked bar chart, and pie chart. Watch the video from 365 Data Science to learn more about some data visualization types and when to use them.

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## Video: Data Visualization Types

Start of transcript. Skip to the end.

Which is the best chart: Selecting am...



This is the perfect video, if you would like to avoid creating charts like this one.

Or perhaps this one...

And especially this one

Being able to choose the right type of chart for the data you are working with is not an

exact science, but I'm sure you will agree something went wrong with



Now that you've learned about different types of data visualizations, let's move onto discuss some popular visualization dashboards.



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