

Histograms are accurate representations of numerical data on a singular axis. The vertical variables are size (height and area) and they display size proportional to data grouped in ranges on one axis. They are used to show a data set with one variable in common and some variance in the data in response to that variable. Histograms provide context within a group of data for how those data relate to one another within the defined groups.

Histograms are the most commonly used to represent frequency distributions, with frequency functioning as the axis across which the bar shapes are compared. They are used to represent the shape of the distribution of data and as such are used to perform business and math analysis. Histograms can also be normalized to display relative frequencies, which will quickly show how often data occur in relation to other data.

Analysing a histogram can be one of the quickest ways to communicate patterns across a data set. Here are some examples of what different distributions might look like in a histogram:

- Normal distribution
- Skewed distribution
- Bimodal distribution
- Multimodal distribution
- Edge peak distribution
- Comb distribution

Source: <https://asq.org/quality-resources/histogram>

The creation of what we consider to be traditional histograms are often attributed to William Playfield, an illustrator creating graphics in the 1780s. However, histograms can be found in history as early as the 1400s by scientist Nicolas Oresme in his publication *The Latitude of Forms*.

(EXAMPLES)

They have been used over time to communicate

(EXAMPLES)

They are often used today to communicate

(EXAMPLES)

Common pitfalls in creating histograms include

(EXAMPLES)

Sources:

<https://datavizcatalogue.com/methods/histogram.html>

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