DATA - Raw facts and figures , Records , files , images , audio , video etc

DATA - After analysing / studying -> we get **INFORMATION**







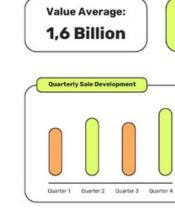




Heat Map

BEST FOR: Visualizing density and distribution in large datasets.

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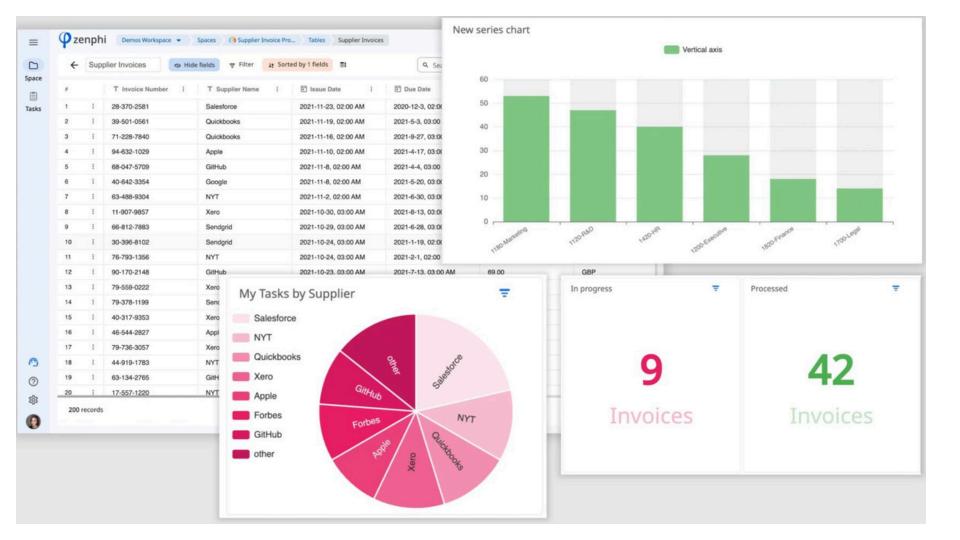


BEST FOR: Presenting the relationship between two variables.



Histogram

BEST FOR: Showing the distribution of continuous data.





1, 2, 3 80,90,100,etc Anything in number

A, b, c

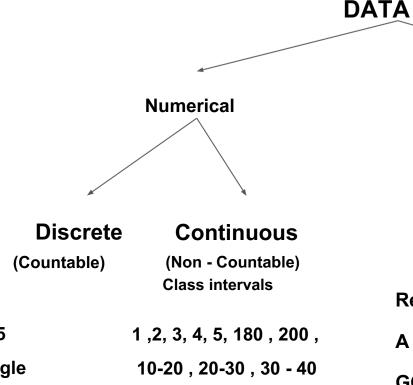
My name is xyz

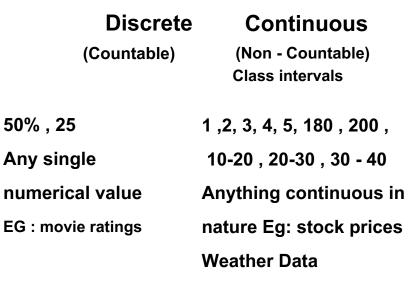
Red, blue, green

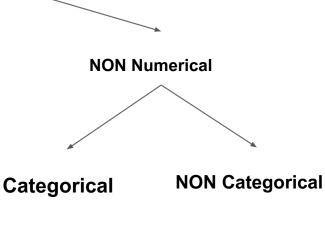
Have a good day

Python Programming

ANYTHING NON Number

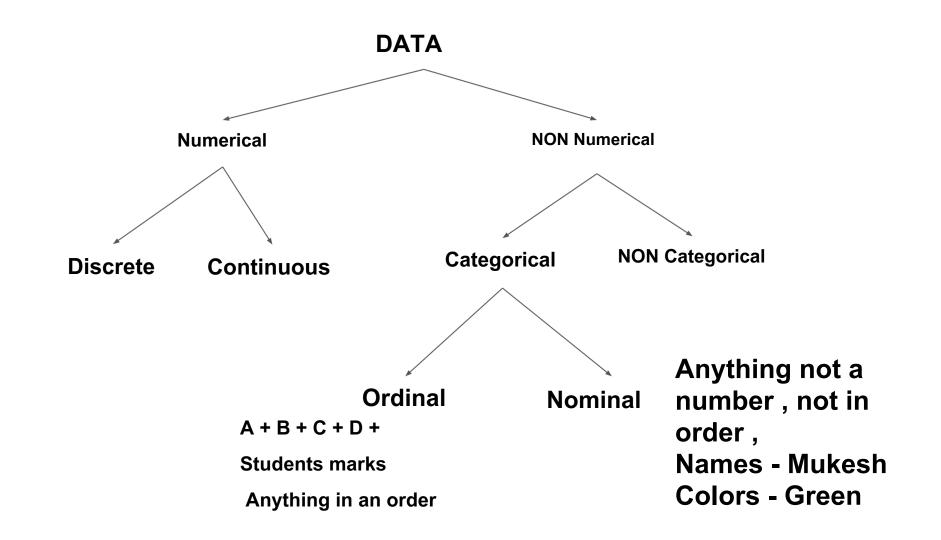


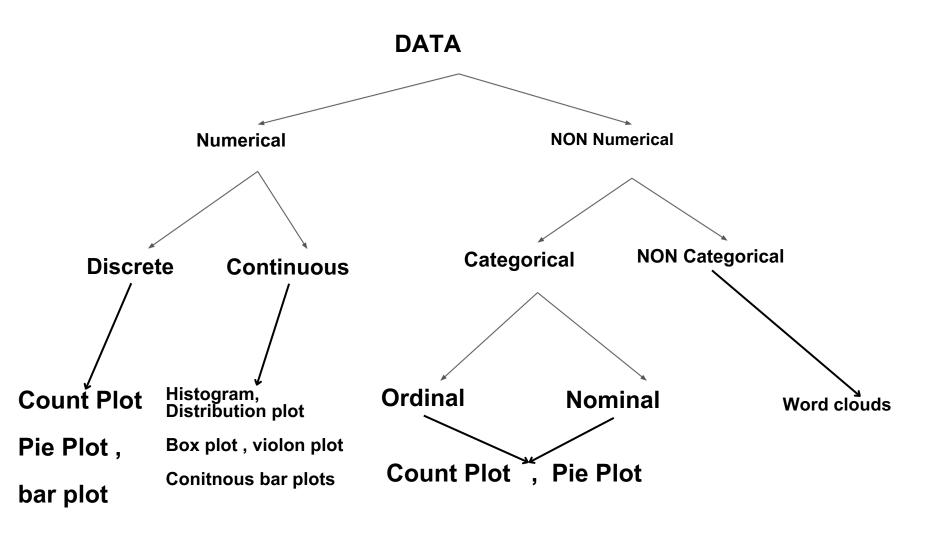




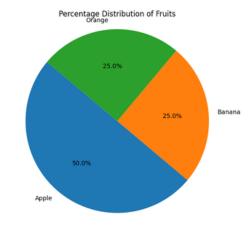
Red , blue , green English sentence
A grade , C+ grade ,
GOod , bad etc Instagram comments

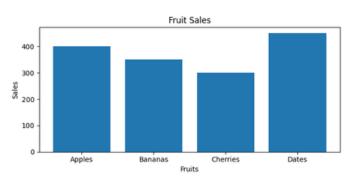
Any category

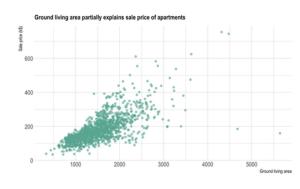


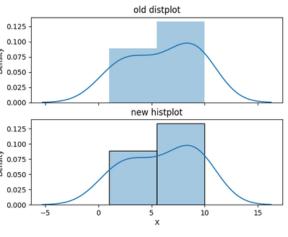


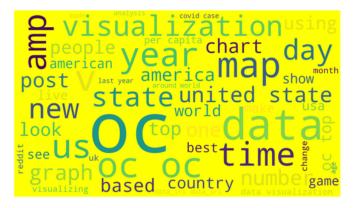
A bunch of relevant plots = Dashboard

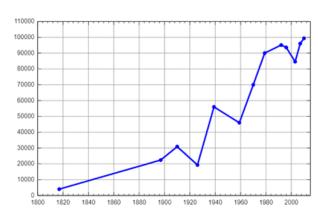












1. Discrete Data (Countable, Finite Values)

Bar Plot – Comparing counts or frequencies of categories.

Count Plot – Shows the count of observations in each category.

Pie Chart – Displays proportional distribution (good for few categories).

Dot Plot – Visualizes individual data points for small datasets.

Histogram (with gaps) – If the discrete data has ordered numeric values.

2. Continuous Data (Infinite, Measurable Values)

Histogram – Shows the distribution of data over continuous intervals.

Box Plot – Displays median, quartiles, and outliers.

Scatter Plot – Examines relationships between two continuous variables.

Line Plot – Best for trends over time (time series).

Density Plot (KDE) – Smoothed distribution of continuous data.

Violin Plot – Combines boxplot and density plot for distribution insights.

3. Categorical Data

✓ Ordinal (Ordered Categories)

► 4. Non-Categorical Data (Mixed or Complex Data)

Bar Plot – To compare frequencies while maintaining the order.

Pair Plot – Visualizes pairwise relationships (great for EDA).

Heatmap – For correlation matrices or spatial data.

Box Plot – Compare distributions across ordered categories.

Bubble Chart – Adds a size dimension to scatter plots.

Treemap – Hierarchical data visualization.

Point Plot – Highlights trends across ordered categories.

Boxen Plot – For large datasets to display data distribution.

Nominal (Unordered Categories)
Bar Plot − Shows counts without concern for order.

Hexbin Plot – For dense scatter plots (bins similar data points).

Pie Chart – For proportional data representation.

Count Plot – Frequency of each category.

Mosaic Plot – Shows proportions across multiple variables.