Density Plot:

A density plot, also known as a kernel density plot, is a data visualization technique that represents the distribution of a continuous variable. It provides a smoothed representation of the underlying data density.

The density plot visualizes the probability density function (PDF) of the data. It displays a smooth curve that represents the estimated probability distribution of the data points. The height of the curve at a specific point indicates the density or concentration of data points in that region.

Density plots are useful for understanding the overall distribution of data, identifying modes or peaks, and detecting skewness or multimodality. They are particularly helpful when working with large datasets where individual data points might not be easily distinguishable.

Contour Plot:

A contour plot, also known as a level plot, is a two-dimensional data visualization technique that represents the variation of a continuous variable over a grid. It uses contour lines or filled regions to display the values of the variable across different levels.

In a contour plot, the horizontal axes represent the independent variables, while the vertical axis represents the dependent variable. The contour lines or filled regions connect points with the same value, forming a contour map. The spacing and shape of the contour lines or regions indicate the relative values of the variable.

Contour plots are commonly used to visualize data with three dimensions, where the third dimension is represented by the contour lines or filled regions. They are useful for identifying patterns, trends, and relationships between variables. Contour plots are often used in fields such as geography, meteorology, and engineering to represent elevation, temperature, pressure, or other continuous variables over a geographic or spatial grid.

Both density and contour plots provide valuable insights into the distribution and variation of continuous variables. They offer a visual representation of the data that helps in understanding patterns, identifying outliers, and making data-driven decisions.