

Distplot

Distplot in seaborn is a tool for univariate analysis. For instance, if you use it to visualize SSC scores with KDE (Kernel Density Estimation) enabled, it creates a histogram showing the density of score intervals, making it easy to spot where the density increases.

Jointplot

Jointplot in seaborn is for bivariate analysis of two independent variables. It combines a histogram on top with a scatter, hex, or kde plot to help visualize the relationship between the variables.

Pairplot

Pairplot in seaborn is great for bivariate analysis, especially for checking multicollinearity. It examines relationships between two variables across multiple features, often using scatter plots to gauge correlation. The diagonal displays histograms or kde plots for individual variables

Category plot

Strip and Swarm plot

Categorical plots like strip plots display scatter points for each category, but overlapping can occur. Swarm plots, a type of categorical plot, address this issue by arranging points to avoid overlap on the y-axis for better visibility.

Distribution observation

Bar plot

A bar plot illustrates the relationship between a categorical variable and a numerical variable, showing the differences in values across categories.

Count plot

A count plot is used to represent the frequency or count of observations within each category of a categorical variable. it's about counting occurrences within different categories.

Violin plot

A violin plot represents the relationship between a categorical variable and a numeric variable. It combines the probability density function (PDF) with a box plot, allowing you to visualize the distribution of data within each category

Box Plot

Box plots are indeed useful for identifying outliers and understanding the distribution of a numeric variable within different categories. The box represents the interquartile range (Q1 to Q3), the line inside the box is the median, and the "whiskers" give information about the spread of the data

Point plot

Point plot shows the relationship between a categorical variable and a numeric variable. It represents the mean of each category, and the line or error bar indicates the confidence interval. Connected lines help check patterns.

Factor plot

A factor plot in seaborn allowed you to represent multiple plots in the same figure or create different subplots for each category. However, it has been deprecated, and the functionality is now covered by catplot in the latest seaborn versions. The purpose and usage remain the same

Reg plot and Implot

Both regplot and Implot are used for linear regression visualization, showing the scatter points and a regression line. However, the difference lies in their flexibility.

Regplot is simpler and great for basic linear models, while Implot is more versatile and can handle complex scenarios. Additionally, the shaded area around the regression line in both cases represents the confidence interval, calculated through bootstrapping.

Pair plot

Pair grid in seaborn is indeed used to represent the pairwise correlation of variables, allowing customization by selecting specific categories for analysis. The diagonal can be a histogram, kde plot, and the off-diagonal elements can represent different relationships.