Assignment NO-8

= Aim :- Data visualization I:

i) Use the inbuilt dataset 'titanic': The dataset contains informatn about the passengers who boarded the unfortunate titanic ship. Use seaborn library to see if we can find any patterns in the data.

ii) write a code to check how the price of ticket by each passenger is distributed by plotting a histogram.

= Introduction :-

In this article we will look at seaborn which is another extremly useful library for data visualizatn in python. The seaborn library is built on top of matpolib & offers many advanced data visualizatn capabilities.

Though, the seaborn library can be used to draw a variety of charts such as matrix plots, grid plots regression plots, etc. in this article we will see how the seaborn library can be used to draw distributional & categorial plots.

= Distributional plots :-

Distributional plots, as name suggested are type of plots that show the statistical distributn of data

= Dist plot :-

shows histogram distribution of data for single column.

= The joint plot :-
Used to display mutual distribution of each column.

= The Rug plot :-
Used to draw small bars along x-axis for each point in dataset.

= categorial plots :-
categorial plots as the name suggest are normally used to plot categorial data.

= The bar plot :-
Used to display mean value for each value in categorial column.

= The count plot :-
similar to bar plot, it displays count of categories in a specific column.

= The box plot :-
Used to display distribution of the categorial data in the form of quartiles.

= The strip plot :-
Used to plot violin plot.

= The swarm plot :-
combination of strip & violin plots.

= combining swarm & violin plots:-

Swarm plots are not recommended if you have a huge dataset since they do not scale well because they have to plot each data point.

= conclusion:-

seaborn is an advanced data visualization library built on top of matplotlib library. In this article we looked at how we can draco distributional & categorical plots using seaborn library.