



Marwadi University
Faculty of Engineering & Technology
Department of Information and Communication Technology

Subject: Programming With Python (01CT1309)

Aim: Practical based on Data Visualization with Seaborn

Experiment No: 27

Date:

Enrollment No: 92510133011

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IDE:

Installation

pip install seaborn

Histplot: Seaborn Histplot is used to visualize the univariate set of distributions(single variable). It plots a histogram, with some other variations like kdeplot and rugplot.

```
import numpy as np
import seaborn as sns
sns.set(style="white")
# Generate a random univariate dataset
rs = np.random.RandomState(10)
d = rs.normal(size=100)
# Plot a simple histogram and kde
sns.histplot(d, kde=True, color="m")
```

Output



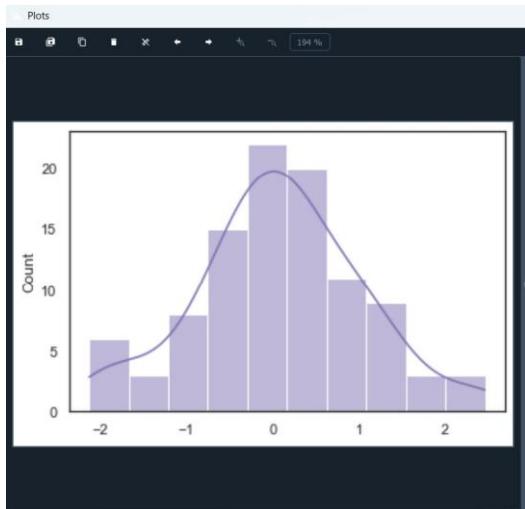
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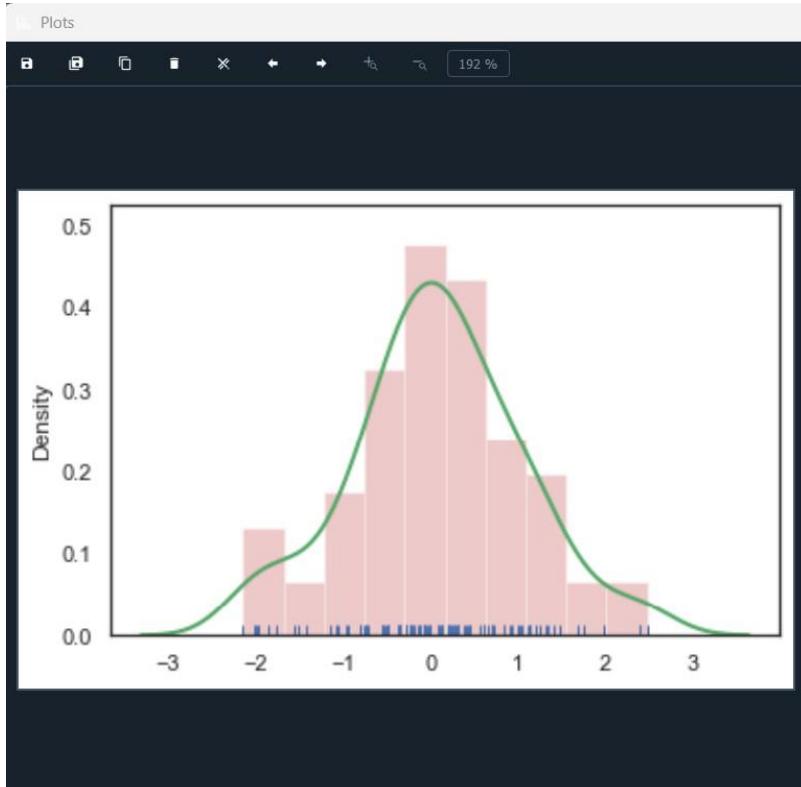
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Distplot: Seaborn distplot is used to visualize the univariate set of distributions(Single features) and plot the histogram with some other variations like kdeplot and rugplot.





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Lineplot: The line plot is one of the most basic plots in the seaborn library. This plot is mainly used to visualize the data in the form of some time series, i.e. in a continuous manner.

```
import seaborn as sns
```

```
sns.set(style="dark")
```

```
fmri = sns.load_dataset("fmri")
```

```
# Plot the responses for different\
```

```
# events and regions
```

```
sns.lineplot(x="timepoint",
```

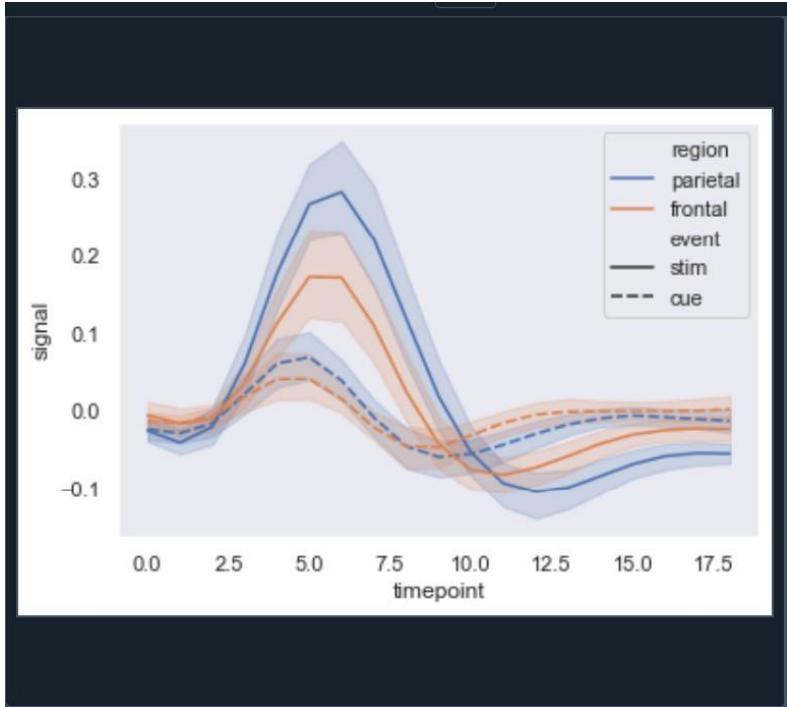
```
    y="signal",
```

```
    hue="region",
```

```
    style="event",
```

```
    data=fmri)
```

```
output
```





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Lmplot: The Lmplot is another most basic plot. It shows a line representing a linear regression model along with data points on the 2D space and x and y can be set as the horizontal and vertical labels respectively.

```
import seaborn as sns
```

```
sns.set(style="ticks")
```

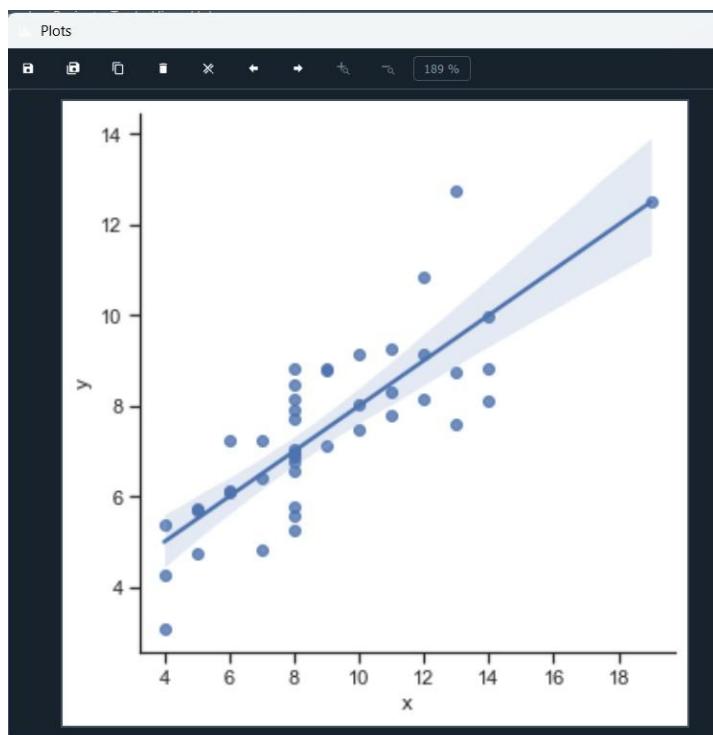
```
# Loading the dataset
```

```
df = sns.load_dataset("anscombe")
```

```
# Show the results of a linear regression
```

```
sns.lmplot(x="x", y="y", data=df)
```

Output





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Post Lab

Visualize the data with a box plot and pandas:

```
import pandas as pd
```

```
import seaborn as sns
```

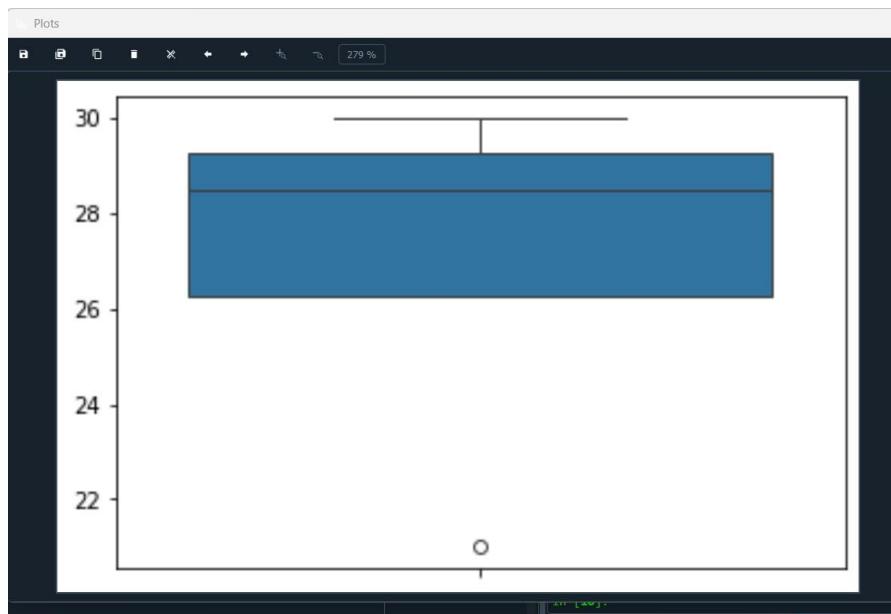
```
# initialise data of lists
```

```
data = {'Name':[ 'Mohe' , 'Karnal' , 'Yrik' , 'jack' ],
```

```
    'Age':[ 30 , 21 , 29 , 28 ]}
```

```
df = pd.DataFrame( data )
```

```
sns.boxplot( data['Age'] )
```





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Draw the violin plot with Pandas

```
import pandas as pd
```

```
import seaborn as sns
```

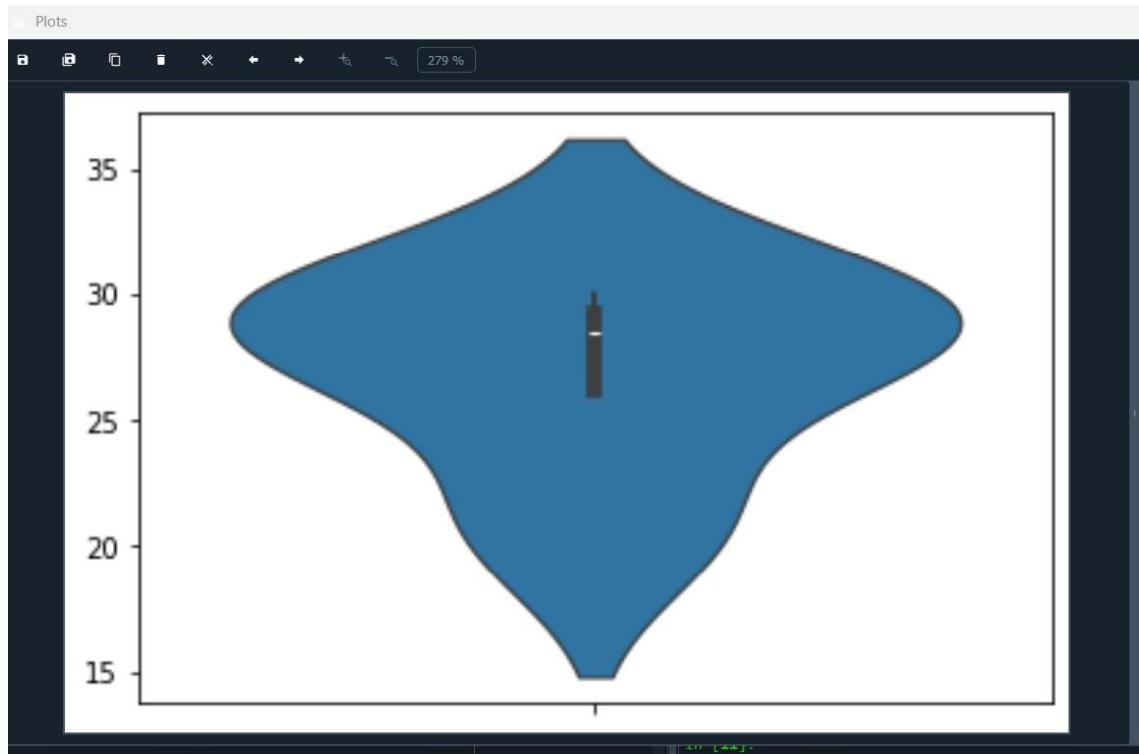
```
# initialise data of lists
```

```
data = {'Name':[ 'Mohe' , 'Karnal' , 'Yrik' , 'jack' ],
```

```
    'Age':[ 30 , 21 , 29 , 28 ]}
```

```
df = pd.DataFrame( data )
```

```
sns.violinplot(data['Age'])
```



Github link: <https://github.com/trupalijasani05/trupali-jasani>