Subject: Programming With

Experiment No: 27 Date: Enrollment No: 92400133104

Aim: Practical based on Data Visualization with Seaborn

IDE: Installation

pip install

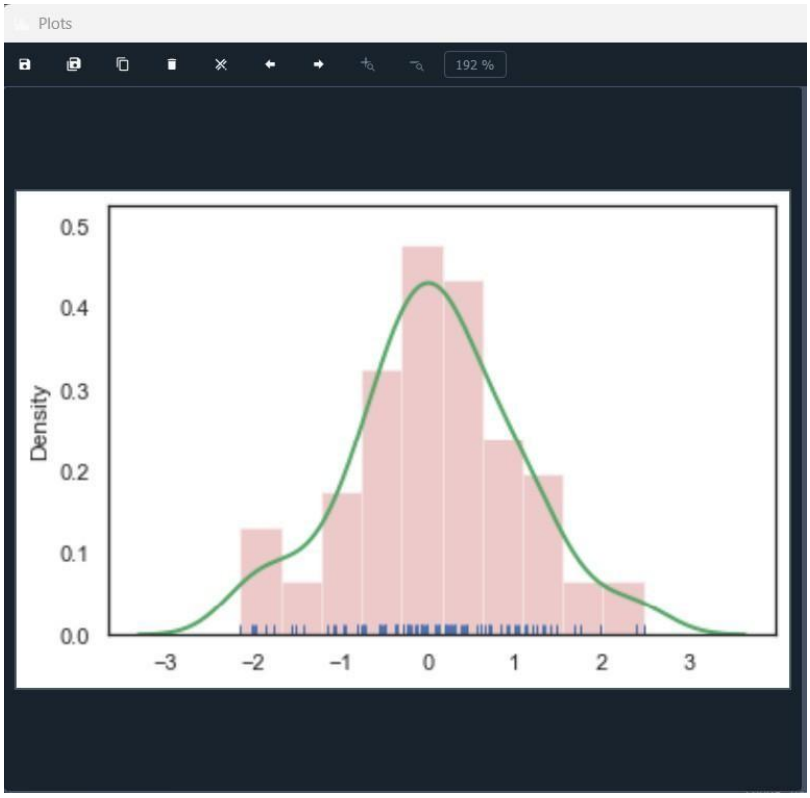
seaborn

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

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.

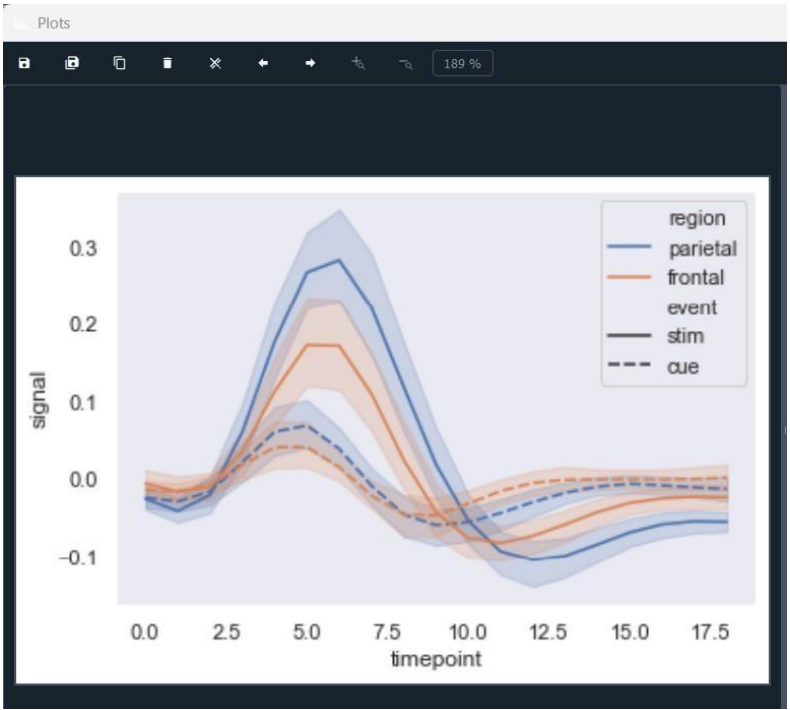


Lineplot: The line plot is one of the most basic plots in the seaborn library. This plot is mainly used to visualize the data in the form of some time series, i.e. in a continuous manner.

```
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
```

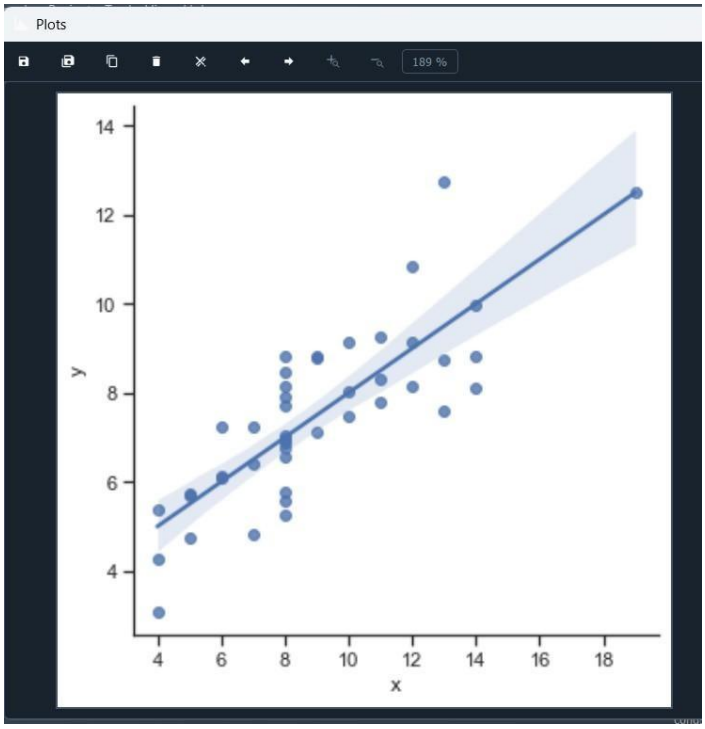
Python (01CT1309) Experiment No: 27 Date: Enrollment No: 92400133104

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



Post Lab

Visualize the data with a box plot and pandas:

```
import pandas as pd
import seaborn as sns
```

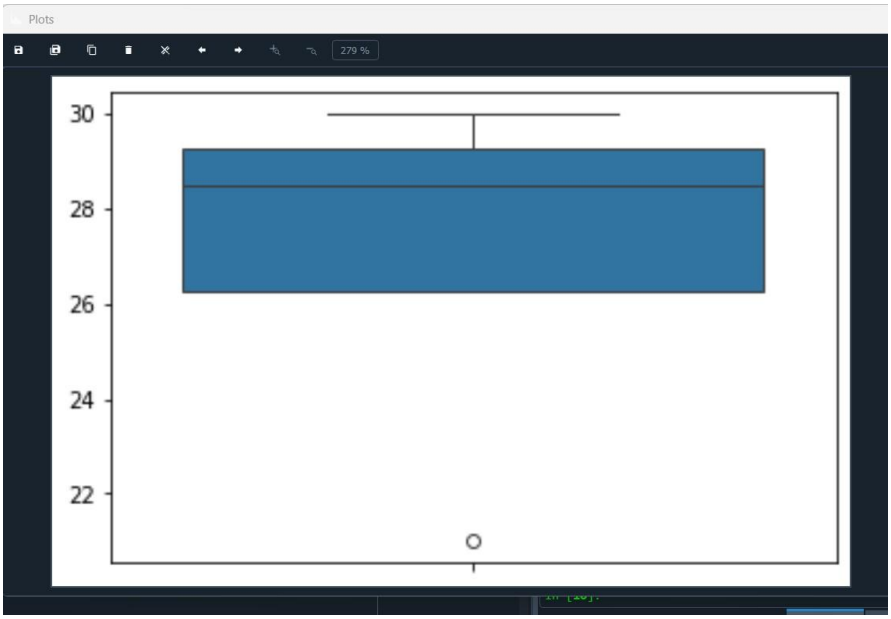
initialise data of lists data = {'Name':['Mohe' ,

'Karnal' , 'Yrik' , 'jack'],

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

df = pd.DataFrame(data)

sns.boxplot(data['Age'])



Python (01CT1309)

Experiment No: 27 Date: Enrollment No: 92400133104

Draw the violin plot with Pandas import pandas

as pd import seaborn as sns # initialise data of

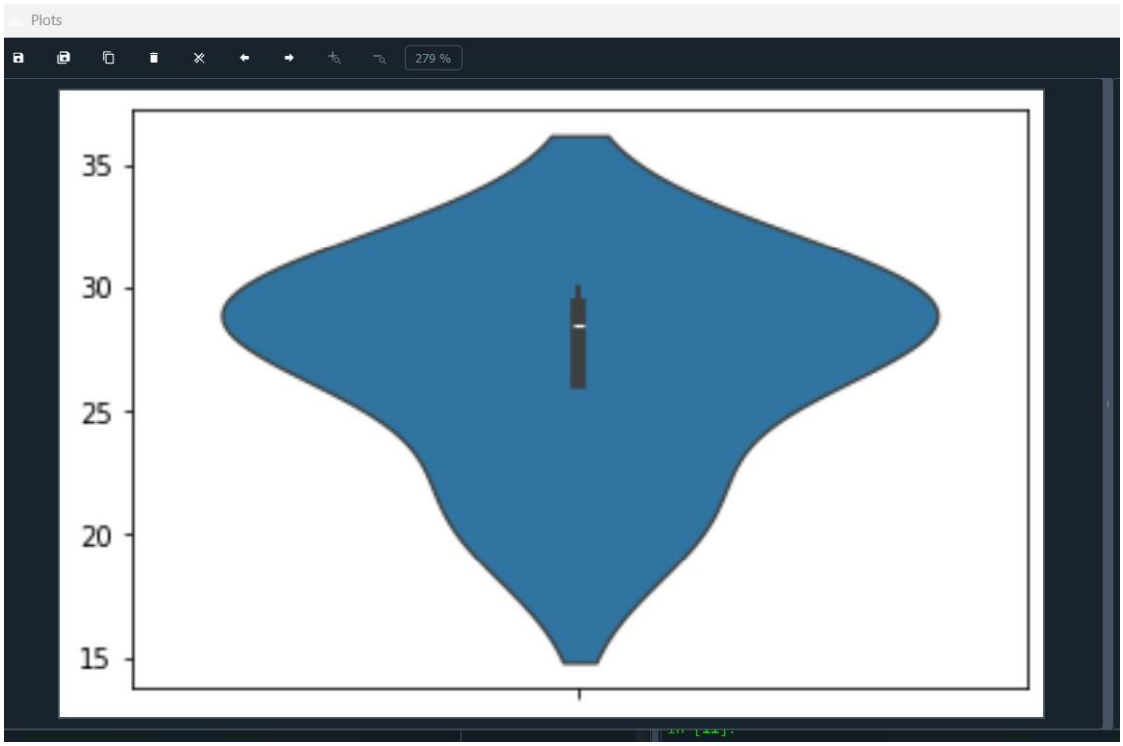
lists data = {'Name':['Mohe' , 'Karnal' , 'Yrik' ,

'jack'],

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

df = pd.DataFrame(data)

sns.violinplot(data['Age'])



Avani0910/Python

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

Marwadi University Marwadi Chandarana Group NAAC A+	**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: 92400133104**