

```

1 import pandas as pd
2 import numpy as np
3 from google.colab import drive
4 drive.mount("/content/drive")

```

Mounted at /content/drive

```

1 df = pd.read_csv("/content/drive/MyDrive/Time series forecasting/Python+CC (1)
2 # header = 0 means our first row contain header
3 df.head(10)

```

|   | Customer ID | Customer Name   | Segment   | Age | Country       | City            | State          | Postal Code | Regi |
|---|-------------|-----------------|-----------|-----|---------------|-----------------|----------------|-------------|------|
| 0 | CG-12520    | Claire Gute     | Consumer  | 67  | United States | Henderson       | Kentucky       | 42420       | So   |
| 1 | DV-13045    | Darrin Van Huff | Corporate | 31  | United States | Los Angeles     | California     | 90036       | W    |
| 2 | SO-20335    | Sean O'Donnell  | Consumer  | 65  | United States | Fort Lauderdale | Florida        | 33311       | So   |
| 3 | BH-11710    | Brosina Hoffman | Consumer  | 20  | United States | Los Angeles     | California     | 90032       | W    |
| 4 | AA-10480    | Andrew Allen    | Consumer  | 50  | United States | Concord         | North Carolina | 28027       | So   |
| 5 | IM-15070    | Irene Maddox    | Consumer  | 66  | United States | Seattle         | Washington     | 98103       | W    |

```

1 df1 = pd.read_csv("/content/drive/MyDrive/Time series forecasting/Python+CC (1)
2             header = 0, index_col = 0) ##index_col =0 means Customer ID
3 # header = 0 means our first row contain header
4 df1.head()

```

|  | Customer ID     | Customer Name   | Segment   | Age | Country       | City            | State      | Postal Code | Region |
|--|-----------------|-----------------|-----------|-----|---------------|-----------------|------------|-------------|--------|
|  | <b>CG-12520</b> | Claire Gute     | Consumer  | 67  | United States | Henderson       | Kentucky   | 42420       | South  |
|  | <b>DV-13045</b> | Darrin Van Huff | Corporate | 31  | United States | Los Angeles     | California | 90036       | West   |
|  | <b>SO-20335</b> | Sean O'Donnell  | Consumer  | 65  | United States | Fort Lauderdale | Florida    | 33311       | South  |

```
1 ## if we want to see 1st row of our dataset
```

```
2 df.iloc[0]
```

```
Customer ID      CG-12520
Customer Name    Claire Gute
Segment          Consumer
Age              67
Country          United States
City             Henderson
State            Kentucky
Postal Code      42420
Region           South
Name: 0, dtype: object
```

```
1 df.loc[0]
```

```
Customer ID      CG-12520
Customer Name    Claire Gute
Segment          Consumer
Age              67
Country          United States
City             Henderson
State            Kentucky
Postal Code      42420
Region           South
Name: 0, dtype: object
```

```
1 df1.iloc[0:2]
```

|                | Customer<br>Name | Segment     | Age      | Country | City          | State     | Postal<br>Code | Region |       |
|----------------|------------------|-------------|----------|---------|---------------|-----------|----------------|--------|-------|
| Customer<br>ID | CG-12520         | Claire Gute | Consumer | 67      | United States | Henderson | Kentucky       | 42420  | South |

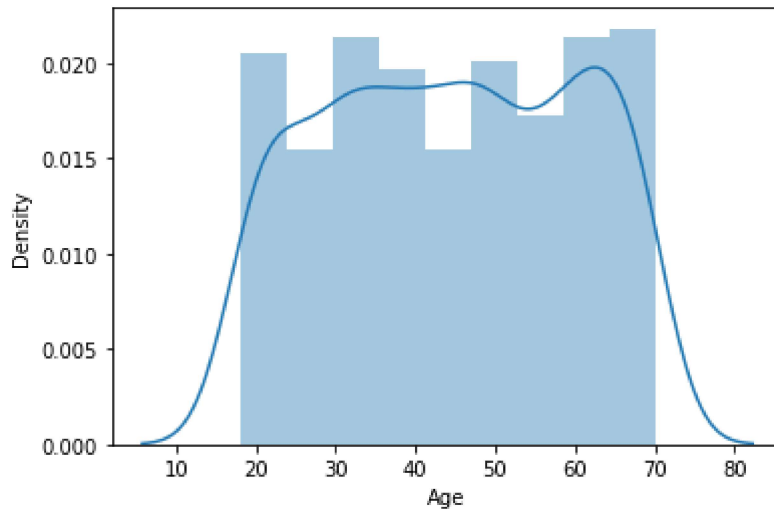
```
1
```

## ▼ Seaborn

```
1 import seaborn as sns
```

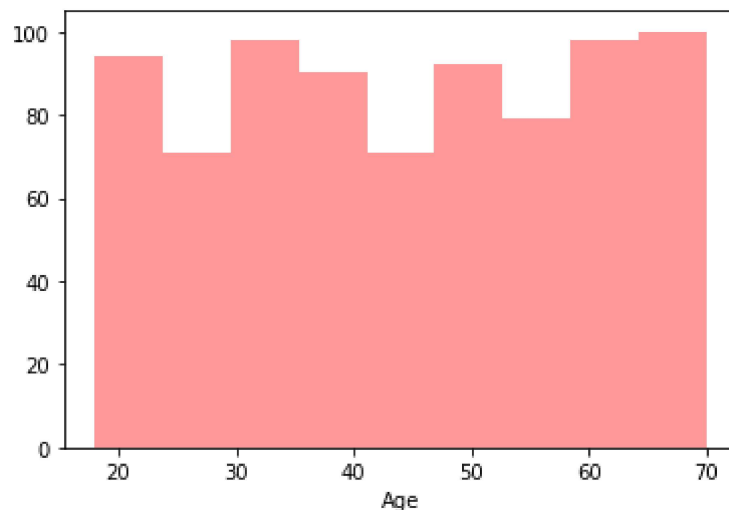
```
1 sns.distplot(df.Age)
```

```
/usr/local/lib/python3.7/dist-packages/seaborn/distributions.py:2619: FutureWarning
warnings.warn(msg, FutureWarning)
<matplotlib.axes._subplots.AxesSubplot at 0x7f3d93a59950>
```



```
1 sns.distplot(df.Age, kde = False, color = 'r')
```

```
/usr/local/lib/python3.7/dist-packages/seaborn/distributions.py:2619: FutureWarning
warnings.warn(msg, FutureWarning)
<matplotlib.axes._subplots.AxesSubplot at 0x7f3d910fc8d0>
```



```
1 help(sns.distplot)
```

```
.. plot::
    :context: close-figs

    >>> import seaborn as sns, numpy as np
    >>> sns.set_theme(); np.random.seed(0)
    >>> x = np.random.randn(100)
    >>> ax = sns.distplot(x)
```

Use Pandas objects to get an informative axis label:

```
.. plot::
```

```
:context: close-figs
```

```
>>> import pandas as pd
>>> x = pd.Series(x, name="x variable")
>>> ax = sns.distplot(x)
```

Plot the distribution with a kernel density estimate and rug plot:

```
.. plot::
    :context: close-figs

    >>> ax = sns.distplot(x, rug=True, hist=False)
```

Plot the distribution with a histogram and maximum likelihood gaussian distribution fit:

```
.. plot::
    :context: close-figs

    >>> from scipy.stats import norm
    >>> ax = sns.distplot(x, fit=norm, kde=False)
```

Plot the distribution on the vertical axis:

```
.. plot::
    :context: close-figs

    >>> ax = sns.distplot(x, vertical=True)
```

Change the color of all the plot elements:

```
.. plot::
    :context: close-figs

    >>> sns.set_color_codes()
    >>> ax = sns.distplot(x, color="y")
```

Pass specific parameters to the underlying plot functions:

```
.. plot::
    :context: close-figs

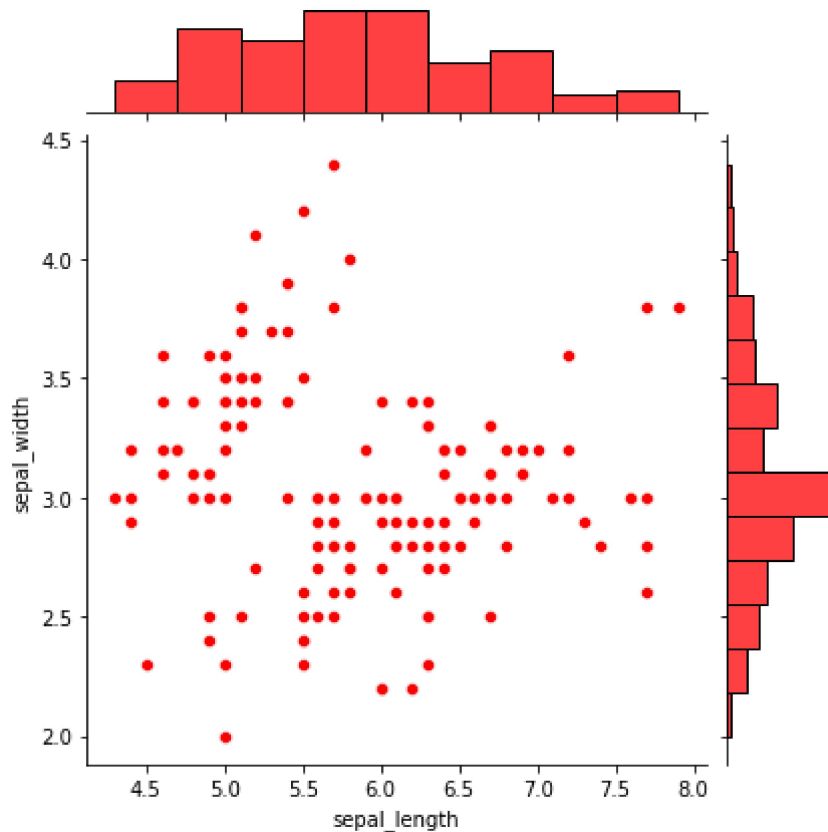
    >>> ax = sns.distplot(x, rug=True, rug_kws={"color": "g"},
    ...                  kde_kws={"color": "k", "lw": 3, "label": "KDE"},
    ...                  hist_kws={"histtype": "step", "linewidth": 3,
    ...                            "alpha": 1, "color": "g"})
```

```
1 iris = sns.load_dataset("iris")
2 iris.head()
```

|   | sepal_length | sepal_width | petal_length | petal_width | species |
|---|--------------|-------------|--------------|-------------|---------|
| 0 | 5.1          | 3.5         | 1.4          | 0.2         | setosa  |
| 1 | 4.9          | 3.0         | 1.4          | 0.2         | setosa  |
| 2 | 4.7          | 3.2         | 1.3          | 0.2         | setosa  |

```
1 sns.jointplot("sepal_length", "sepal_width", data = iris, color = 'r')
```

```
/usr/local/lib/python3.7/dist-packages/seaborn/_decorators.py:43: FutureWarning: P
FutureWarning
<seaborn.axisgrid.JointGrid at 0x7f3d910948d0>
```

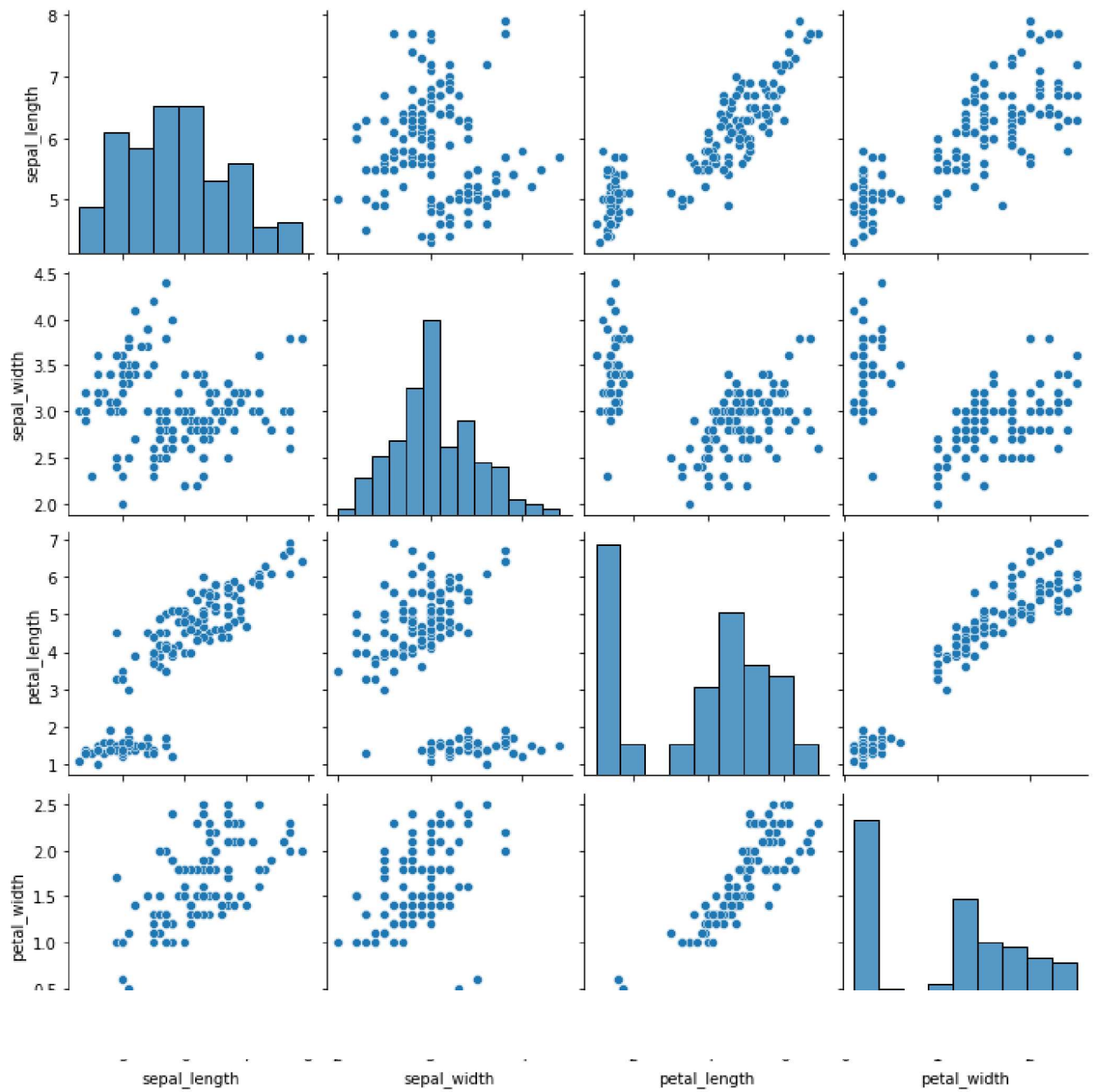


1

Scatter plot for all the variables

```
1 sns.pairplot(data = iris)
```

<seaborn.axisgrid.PairGrid at 0x7f3d8e290910>



1

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