Data Visualization

Step-1

```
import seaborn as sns
import matplotlib.pyplot as plt
```

Step-2 Load Dataset

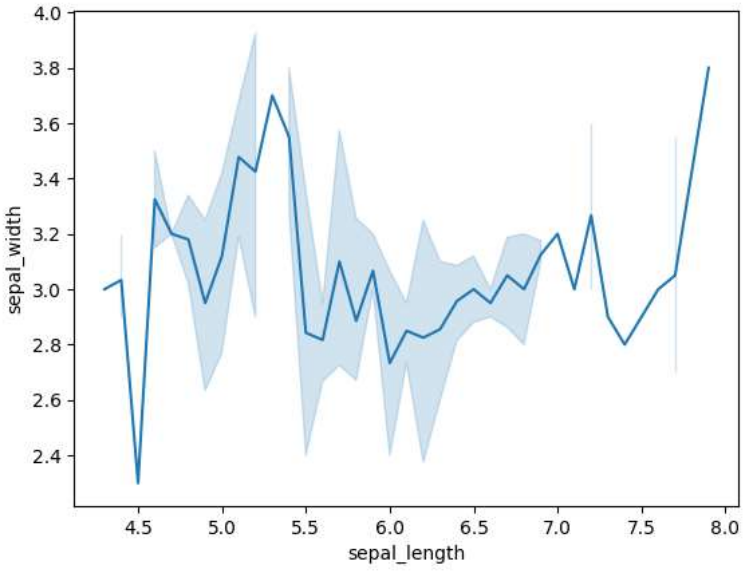
```
iris = sns.load_dataset("iris")
iris.head()
```

	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
3	4.6	3.1	1.5	0.2	setosa
4	5.0	3.6	1.4	0.2	setosa

Step-3 Plot a graph

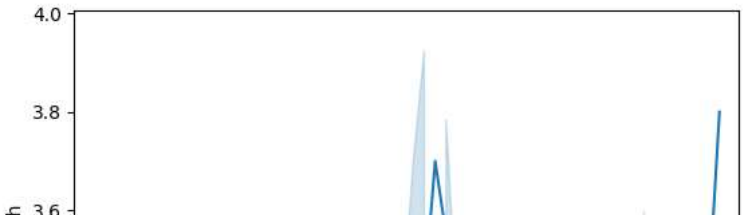
```
sns.lineplot(x="sepal_length",y="sepal_width", data=iris)
```

```
<Axes: xlabel='sepal_length', ylabel='sepal_width'>
```



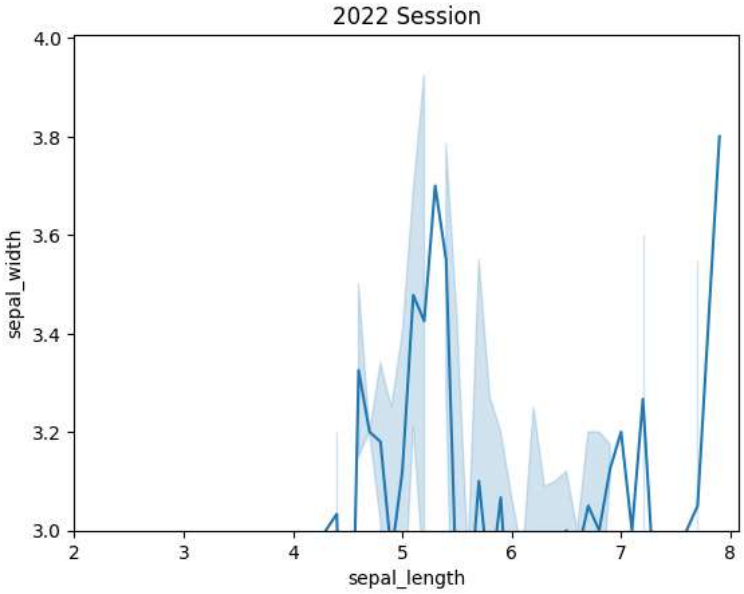

```
sns.lineplot(x="sepal_length",y="sepal_width", data=iris)
plt.xlim(2)
plt.ylim(3)
```

```
(3.0, 4.00625)
```




```
sns.lineplot(x="sepal_length",y="sepal_width", data=iris)
plt.xlim(2)
plt.ylim(3)
plt.title("2022 Session")
```

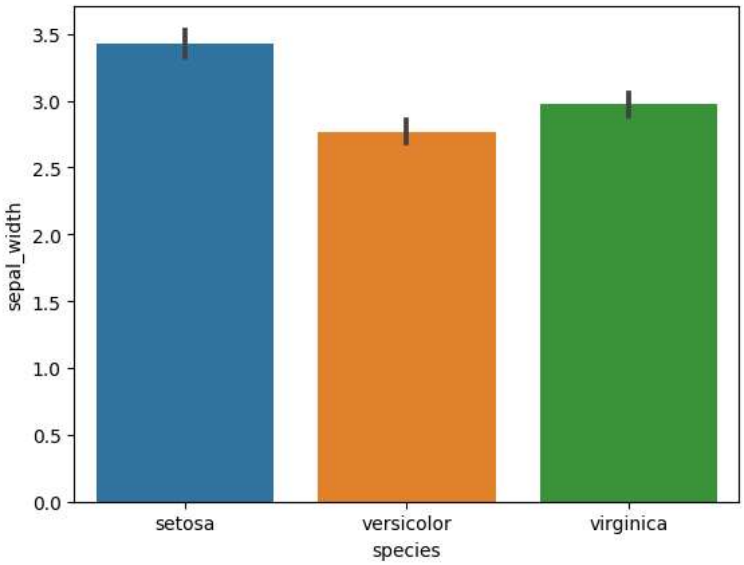
```
Text(0.5, 1.0, '2022 Session')
```



Bar Code

```
sns.barplot(x="species",y="sepal_width", data=iris)
```

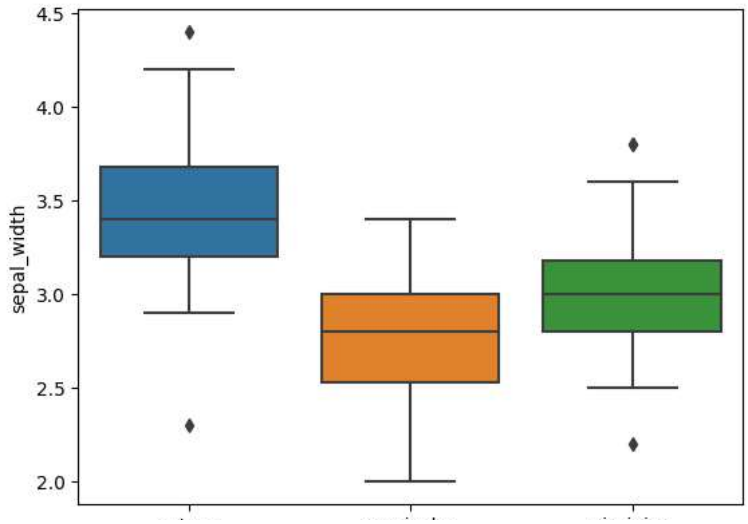
```
<Axes: xlabel='species', ylabel='sepal_width'>
```



Box Plot

```
sns.boxplot(x="species",y="sepal_width", data=iris)
```

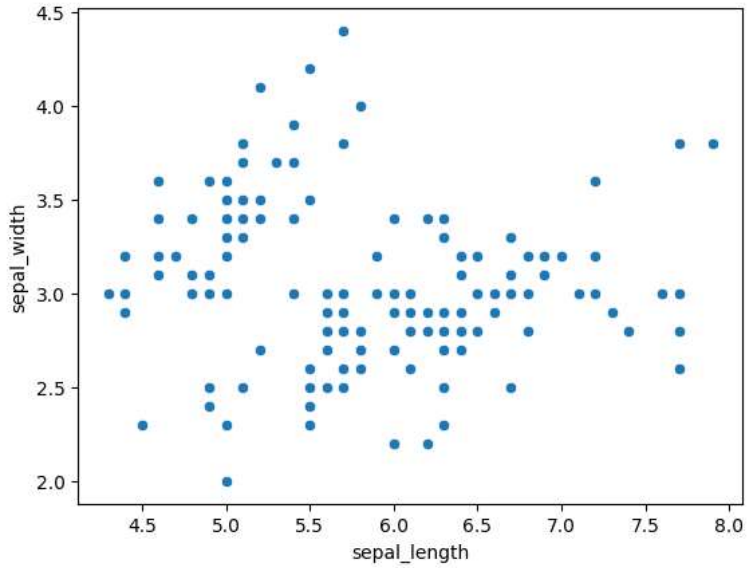
```
<Axes: xlabel='species', ylabel='sepal_width'>
```



Scatter Plot

```
sns.scatterplot(x="sepal_length",y="sepal_width", data=iris)
```

```
<Axes: xlabel='sepal_length', ylabel='sepal_width'>
```



Catplot

```
sns.catplot(x="species",y="sepal_width", data=iris,color="blue")
```

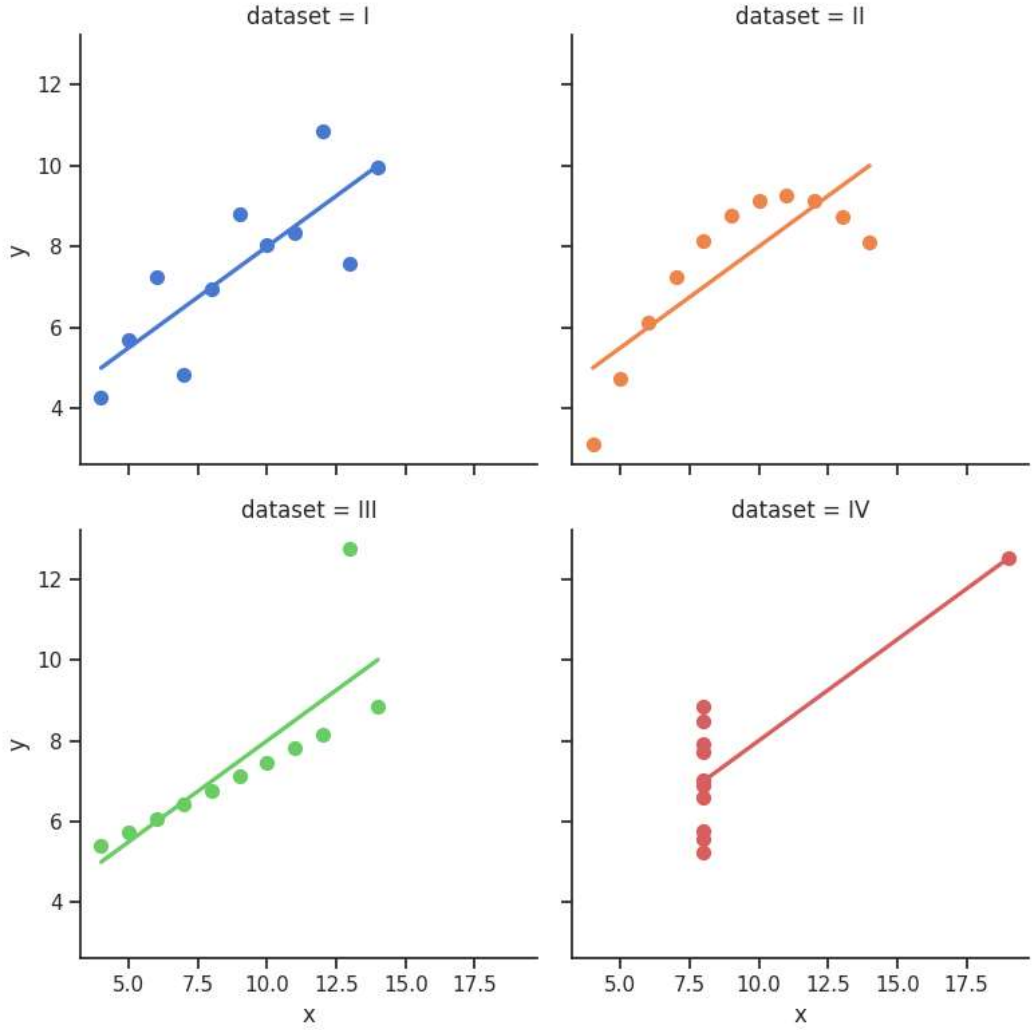
```
<seaborn.axisgrid.FacetGrid at 0x7f1451593790>
```


```
import seaborn as sns
sns.set_theme(style="ticks")

# Load the example dataset for Anscombe's quartet
df = sns.load_dataset("anscombe")

# Show the results of a linear regression within each dataset
sns.lmplot(
    data=df, x="x", y="y", col="dataset", hue="dataset",
    col_wrap=2, palette="muted", ci=None,
    height=4, scatter_kws={"s": 50, "alpha": 1}
)
```

```
<seaborn.axisgrid.FacetGrid at 0x7f1450f47be0>
```

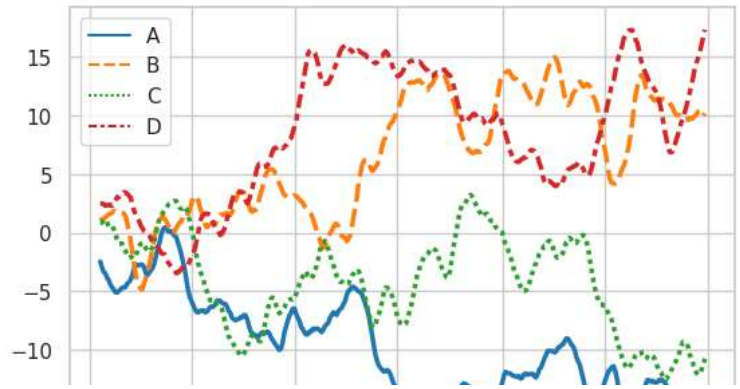



```
import numpy as np
import pandas as pd
import seaborn as sns
sns.set_theme(style="whitegrid")

rs = np.random.RandomState(365)
values = rs.randn(365, 4).cumsum(axis=0)
dates = pd.date_range("1 1 2016", periods=365, freq="D")
data = pd.DataFrame(values, dates, columns=["A", "B", "C", "D"])
data = data.rolling(7).mean()

sns.lineplot(data=data, palette="tab10", linewidth=2.5)
```

```
<Axes: >
```

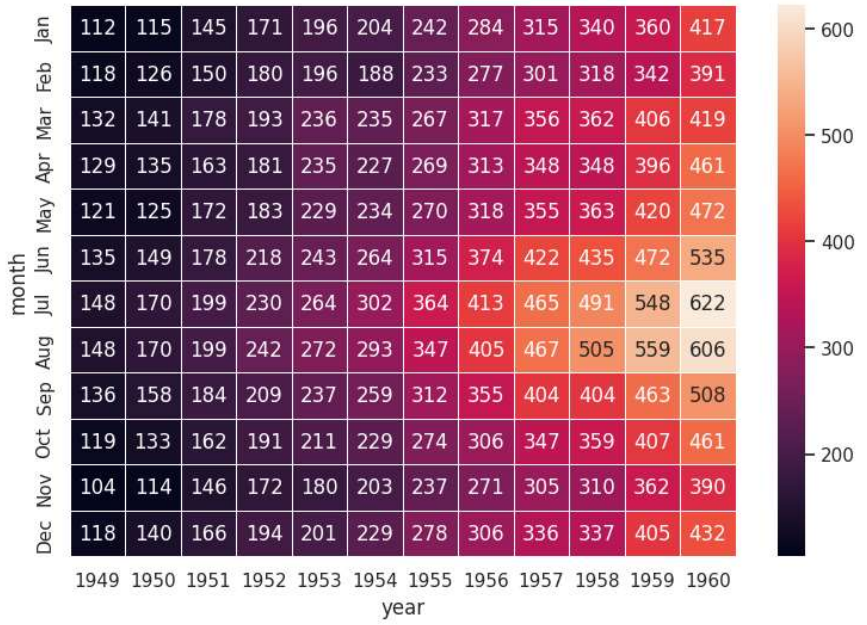



```
import matplotlib.pyplot as plt
import seaborn as sns
sns.set_theme()

# Load the example flights dataset and convert to long-form
flights_long = sns.load_dataset("flights")
flights = flights_long.pivot("month", "year", "passengers")

# Draw a heatmap with the numeric values in each cell
f, ax = plt.subplots(figsize=(9, 6))
sns.heatmap(flights, annot=True, fmt="d", linewidths=.5, ax=ax)
```

```
<ipython-input-24-fd553bdfde69>:7: FutureWarning: In a future version of pandas all a
  flights = flights_long.pivot("month", "year", "passengers")
<Axes: xlabel='year', ylabel='month'>
```



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