#### → Data Visualization

## ▼ Step-1

import seaborn as sns
import matplotlib.pyplot as plt

## → Step-2 Load Dataset

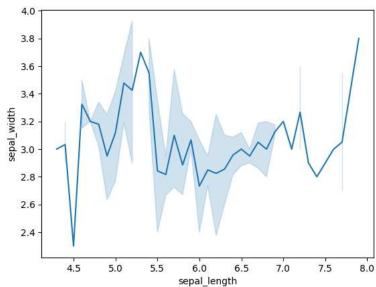
iris = sns.load\_dataset("iris")
iris.head()

	sepal_length	sepal_width	petal_length	petal_width	species	1
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	

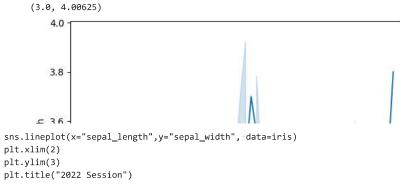
### ▼ Step-3 Plot a graph

sns.lineplot(x="sepal\_length",y="sepal\_width", data=iris)

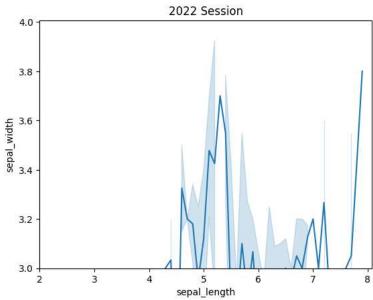
<Axes: xlabel='sepal\_length', ylabel='sepal\_width'>



sns.lineplot(x="sepal\_length",y="sepal\_width", data=iris)
plt.xlim(2)
plt.ylim(3)

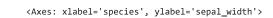


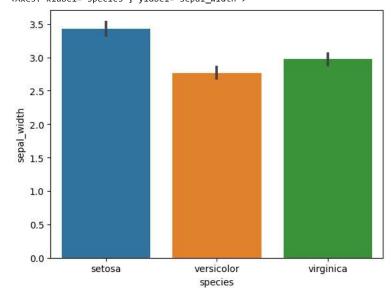
Text(0.5, 1.0, '2022 Session')



#### → Bar Code

sns.barplot(x="species",y="sepal\_width", data=iris)

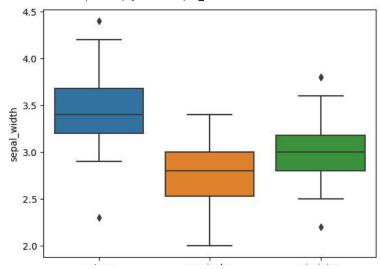




#### ▼ Box Plot

sns.boxplot(x="species",y="sepal\_width", data=iris)

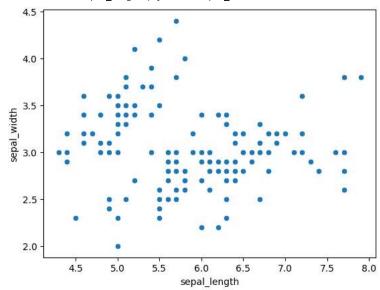
<Axes: xlabel='species', ylabel='sepal\_width'>



# → 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")

```
6/5/23, 10:38 PM
                                                                       Untitled2.ipynb - Colaboratory
         <seaborn.axisgrid.FacetGrid at 0x7f1451593790>
             4.5 7
    import seaborn as sns
    sns.set_theme(style="ticks")
   # Load the example dataset for Anscombe's quartet
   df = sns.load_dataset("anscombe")
   \ensuremath{\mathtt{\#}} 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>
                                  dataset = I
                                                                                    dataset = II
             12
             10
              8
              6
               4
                                  dataset = III
                                                                                    dataset = IV
             12
             10
              8
              6
              4
                     5.0
                            7.5
                                  10.0
                                         12.5
                                                15.0
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                                                                                                  15.0 17.5
                                        Х
                                                                                          Х
    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: >
       15
                   В
                   C
       10
                   D
        5
        0
       -5
      -10
import matplotlib.pyplot as plt
```

import seaborn as sns sns.set\_theme()

 $\ensuremath{\text{\#}}\xspace$  Load the example flights dataset and convert to long-form flights\_long = sns.load\_dataset("flights") flights = flights\_long.pivot("month", "year", "passengers")

 $\ensuremath{\text{\#}}$  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  $\epsilon$  flights = flights\_long.pivot("month", "year", "passengers") <Axes: xlabel='year', ylabel='month'>

	Jan	112	115	145	171	196	204	242	284	315	340	360	417	- 600	)
	Feb	118	126	150	180	196	188	233	277	301	318	342	391		
	Mar	132	141	178	193	236	235	267	317	356	362	406	419	- 500	)
	Apr	129	135	163	181	235	227	269	313	348	348	396	461		
	May	121	125	172	183	229	234	270	318	355	363	420	472		
ıth	nn	135	149	178	218	243	264	315	374	422	435	472	535	- 400	)
month	크	148	170	199	230	264	302	364	413	465	491	548	622		
	Ang	148	170	199	242	272	293	347	405	467	505	559	606	- 300	)
	Sep	136	158	184	209	237	259	312	355	404	404	463	508		
	Oct	119	133	162	191	211	229	274	306	347	359	407	461	- 200	)
	Nov	104	114	146	172	180	203	237	271	305	310	362	390		
	Dec	118	140	166	194	201	229	278	306	336	337	405	432		

1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 year

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