### Data visualization

## → Step-1 Import Library

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import seaborn as sns
import matplotlib.pyplot as plt

### ▼ Step-2 Load Dataset

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

	dataset	х	у	1
0	I	10.0	8.04	
1	1	8.0	6.95	
2	1	13.0	7.58	
3	1	9.0	8.81	
4	1	11.0	8.33	

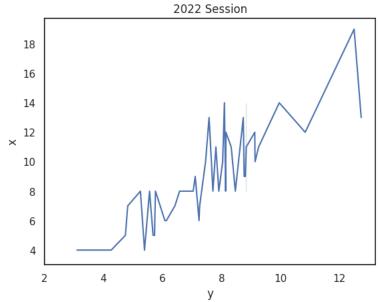
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# → Step-3 Plot a graph

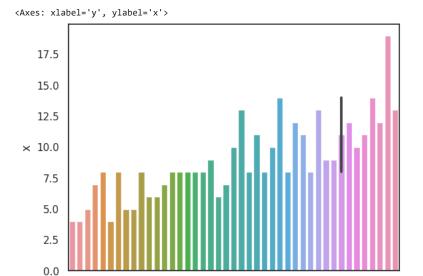
```
sns.lineplot(x="y",y="x",data=anscombe)
plt.xlim(2)
plt.ylim(3)
plt.title("2022 Session")
```

Text(0.5, 1.0, '2022 Session')



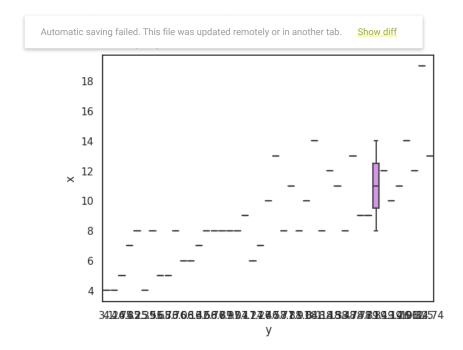
#### ▼ Bar plot

sns.barplot(x="y",y="x",data=anscombe)



У

## ▼ Box plot



# → Scatter Plot

sns.scatterplot(x="y",y="x",data=anscombe)

<Axes: xlabel='y', ylabel='x'>

18

16

14

× 12

10

8

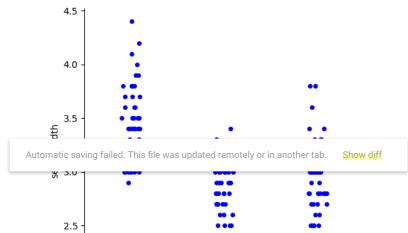
### → Catplot

2.0

setosa

sns.catplot(x="species",y="sepal\_width",data=iris,color="blue")

<seaborn.axisgrid.FacetGrid at 0x7f216019af20>



versicolor

species

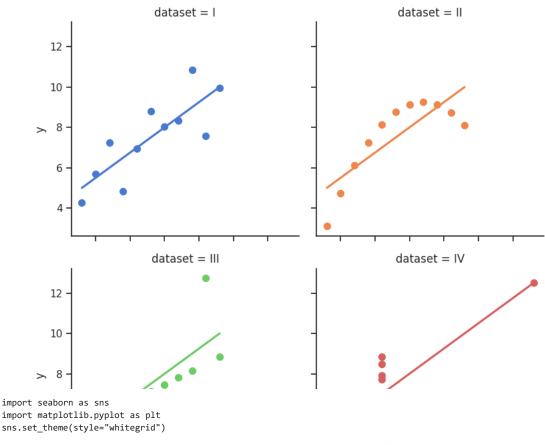
virginica

```
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 0x7f216024c130>

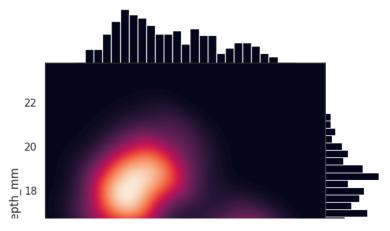


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<Axes: xlabel='carat', ylabel='price'>
         17500
import matplotlib.pyplot as plt
import seaborn as sns
sns.set_theme()
# Load the example flights dataset and convert to long-form
flights_long = sns.load_dataset("flights")
flights = flights_long.pivot("month", "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-21-fd553bdfde69>:7: FutureWarning: In a future version of pandas all arguments of DataFr
      flights = flights_long.pivot("month", "year", "passengers")
     <Axes: xlabel='year', ylabel='month'>
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                                              year
import seaborn as sns
sns.set_theme(style="white")
df = sns.load_dataset("penguins")
```

```
g = sns.JointGrid(data=df, x="body_mass_g", y="bill_depth_mm", space=0)
g.plot_joint(sns.kdeplot,
             fill=True, clip=((2200, 6800), (10, 25)),
             thresh=0, levels=100, cmap="rocket")
g.plot_marginals(sns.histplot, color="#03051A", alpha=1, bins=25)
```

<seaborn.axisgrid.JointGrid at 0x7f21604b5210>



#### **Data Visualization**

#### Step-1 Import library

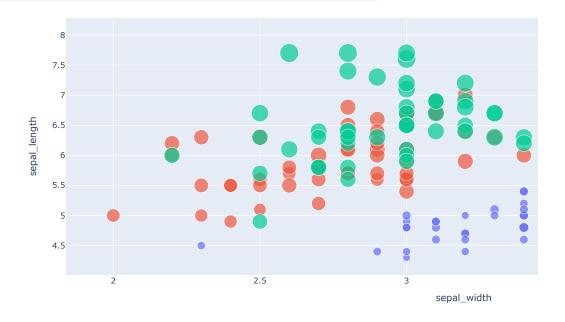
```
import seaborn as sns
import matplotlib.pyplot as plt

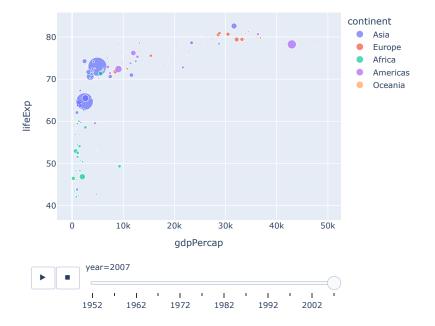
3000 4000 5000 6000
```

Double-click (or enter) to edit

import plotly.express as px
fig = px.scatter(iris, x="sepal\_width", y="sepal\_length", color="species", size='petal\_length', hover\_data=['petal\_width'])
fig.show()

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