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Data Visualizatio

Data Visualization using Matplotlib in Python.ipynb

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Code

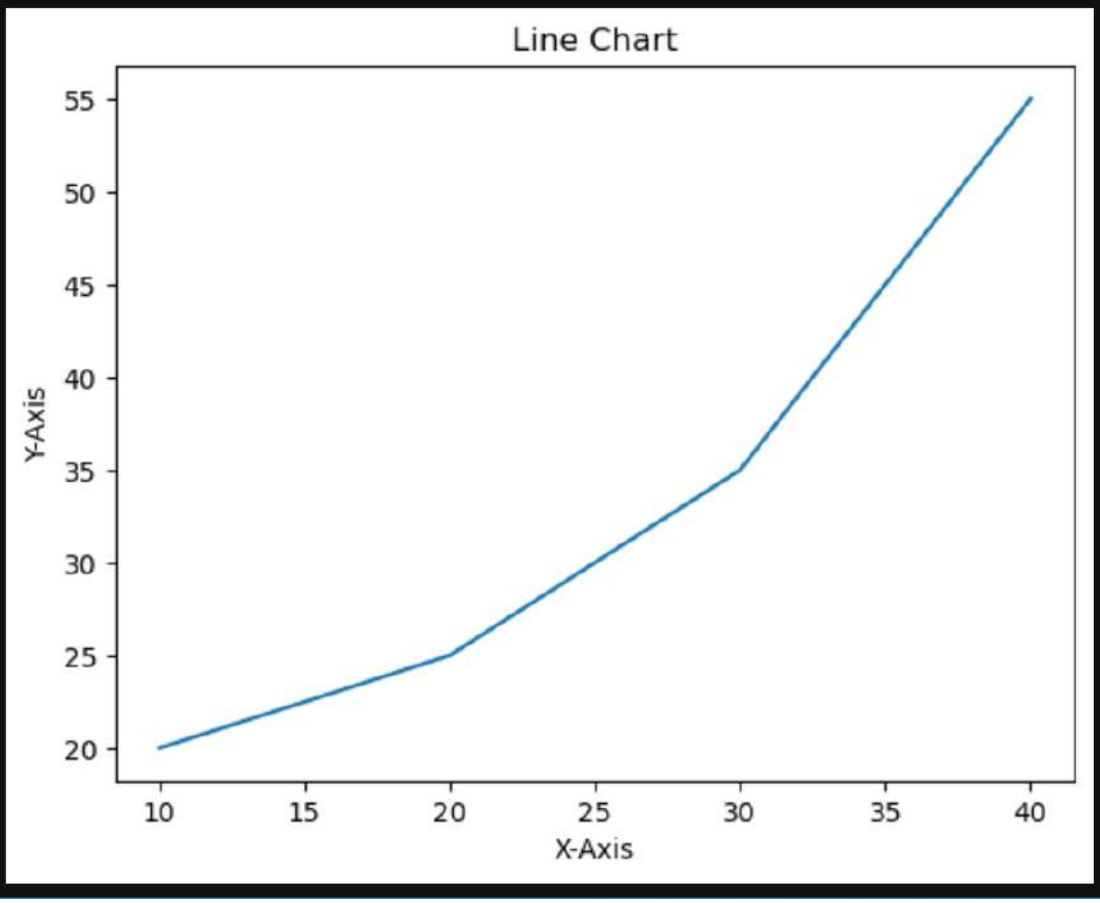
Data Visualization using Matplotlib in Python

1. Line Chart

[6]:
```
import matplotlib.pyplot as plt
```

[16]:
```
x = [10, 20,30,40]
y = [20, 25, 35, 55]
# plotting the data
plt.plot(x,y)

# Adding title to the plot
plt.title("Line Chart")
# Adding label on the y-axis
plt.ylabel("Y-Axis")
# Adding label on the x-axis
plt.xlabel("X-Axis")
plt.show()
```



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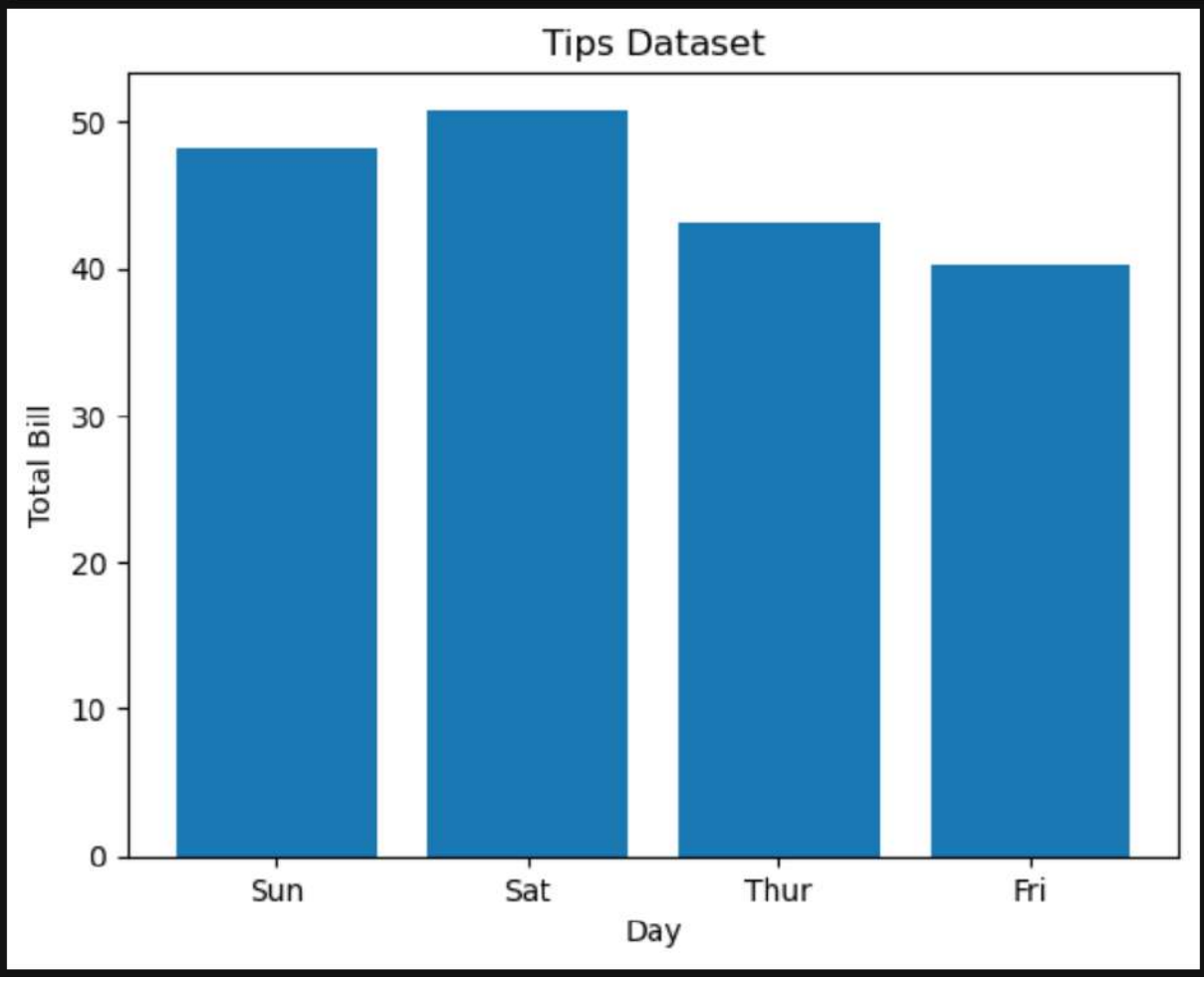
2. Bar Chart

[29]:
```
import matplotlib.pyplot as plt
import pandas  as pd
# Reading the tips.csv file
data = pd.read_csv(r"/Users/babarhussain/Desktop/tips.csv")
# initializing the data
x = data['day']
y = data['total_bill']
# plotting the data
plt.bar(x,y)
# Adding title to the plot
plt.title("Tips Dataset")
# Adding label on the y-axis
plt.ylabel("Total Bill")
# Adding label on the x-axis
plt.xlabel('Day')

plt.show()
```



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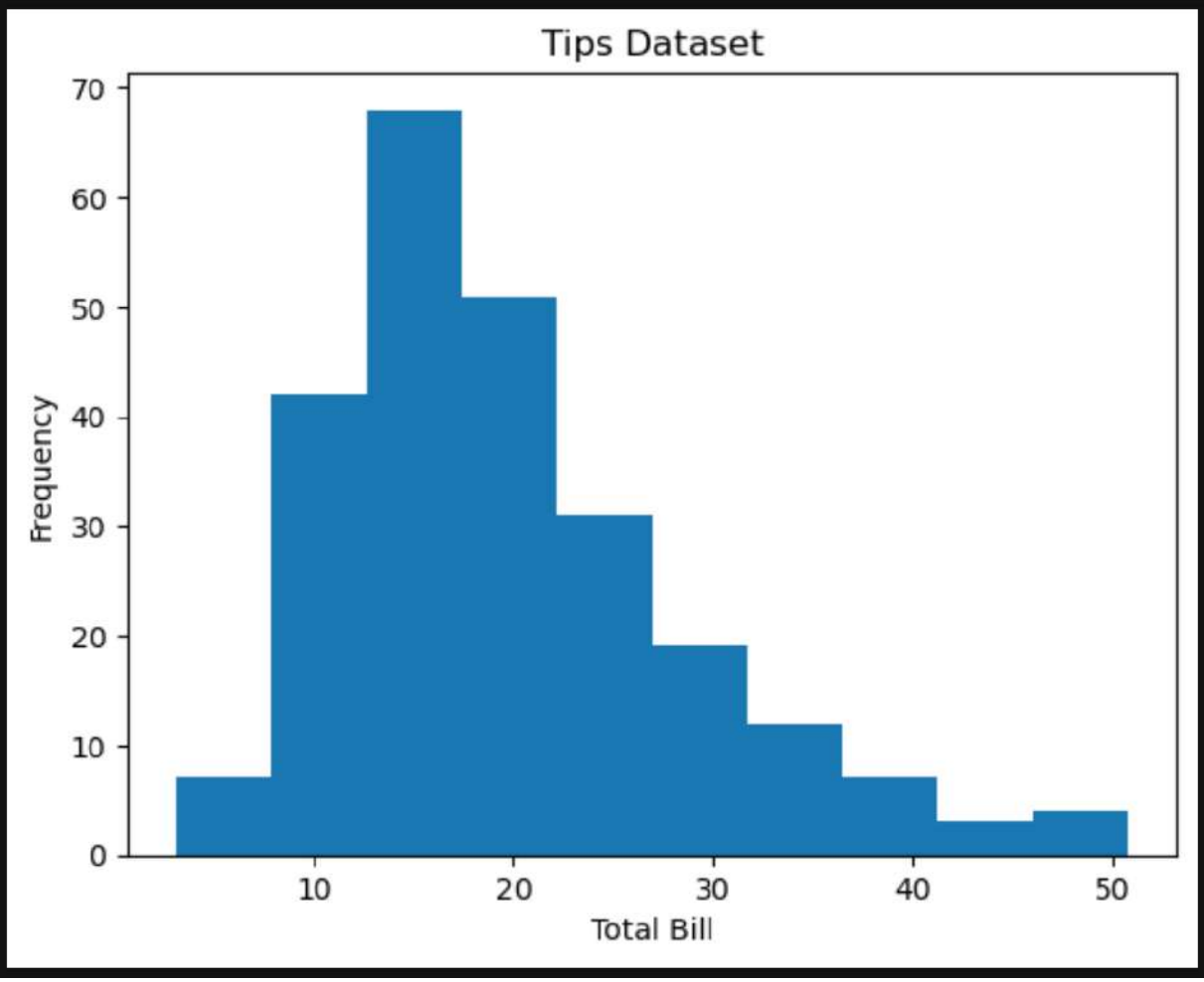
3. Histogram

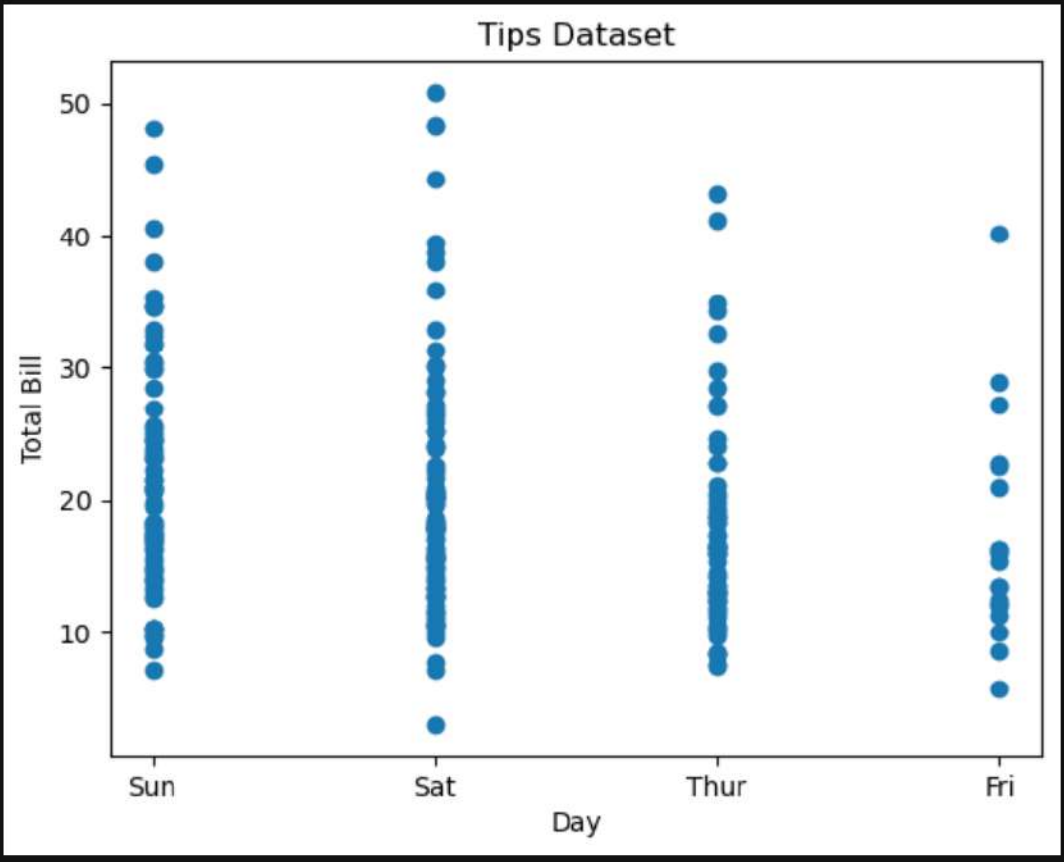
[32]:
```
import matplotlib.pyplot as plt
import pandas as pd
```

[38]:
```
# Reading the tips.csv file
data = pd.read_csv(r"/Users/babarhussain/Desktop/tips.csv")
# initializing the data
x = data['total_bill']
# plotting the data
plt.hist(x)
# Adding title to the plot
plt.title("Tips Dataset")
# Adding label on the y-axis
plt.ylabel("Frequency")
# Adding label on the x-axis
plt.xlabel('Total Bill')
#show
plt.show()
```



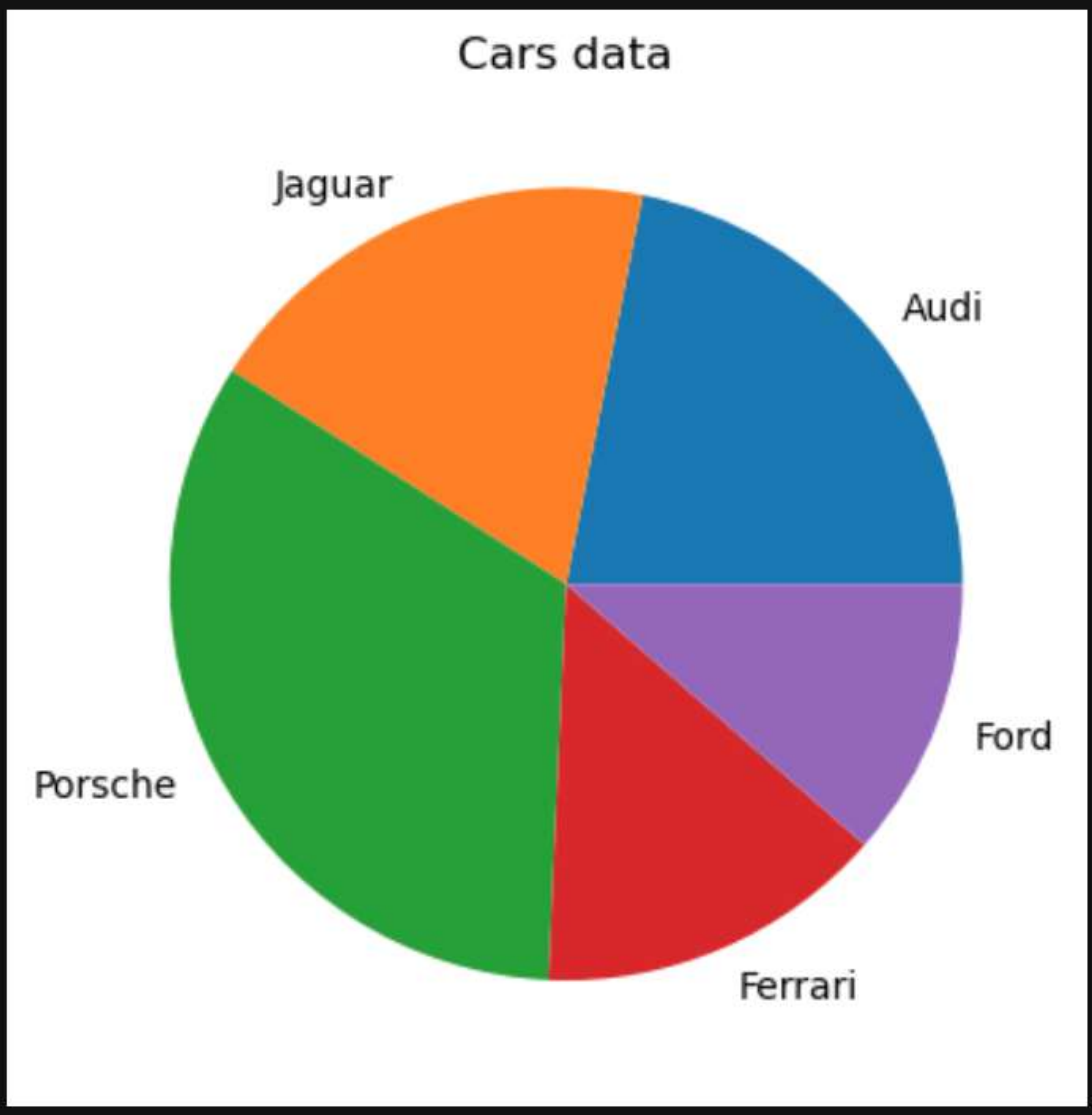
4. Scatter Plot

[44]:
```
import matplotlib.pyplot as plt
import pandas as pd
# Reading the tips.csv file
data = pd.read_csv(r"/Users/babarhussain/Desktop/tips.csv")

# initializing the data
x = data['day']
y = data['total_bill']

# plotting the data
plt.scatter(x, y)

# Adding title to the plot
plt.title("Tips Dataset")

# Adding label on the y-axis
plt.ylabel('Total Bill')

# Adding label on the x-axis
plt.xlabel('Day')

plt.show()
```



5. Pie Chart

[57]:
```
import matplotlib.pyplot as plt
import pandas as pd
# Reading the tips.csv file
data = pd.read_csv(r"/Users/babarhussain/Desktop/tips.csv")
# initializing the data
cars = ["Audi", "Jaguar","Porsche","Ferrari","Ford"]
models = [23, 20, 35,15,12]
# plotting the data
plt.pie(models, labels=cars)
# Adding title to the plot
plt.title("Cars data")

plt.show()
```



Customizing Pie Chart

[91]:
```
# explode: Moving the wedges of the plot
#autopct: Label the wedge with their numerical value.

# shadow: Used to create shadow of wedge.
import matplotlib.pyplot as plt
import pandas as pd
# Reading the tips.csv file
data = pd.read_csv(r"/Users/babarhussain/Desktop/tips.csv")
# initializing the data
cars = ['AUDI', 'BMW', 'FORD',
        'TESLA', 'JAGUAR',]
data = [23, 13, 35, 15, 12]
# exlode : Moving the wedges of the plot
explode = [0.1, 0.3, 0, 0, 0]
# color: Attribute is used to provide color to the wedges.
colors = ("Orange", "black", "Purple", "Green", "pink")
# plotting the data
plt.pie(data, labels=cars, explode=explode, colors=colors, a
# show Pie chart
plt.show()
```