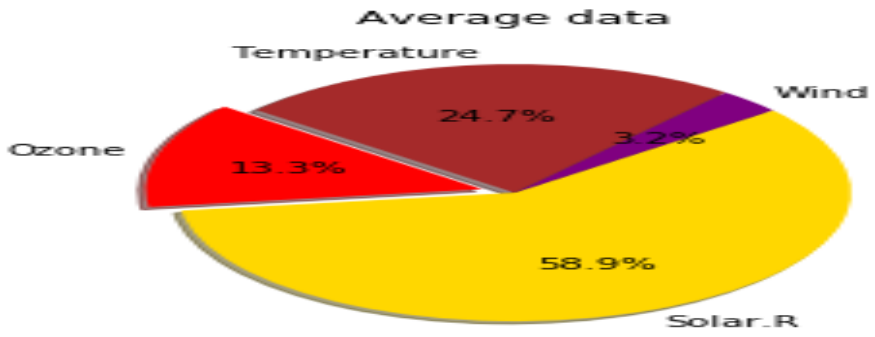
PYTHON

PIE CHART

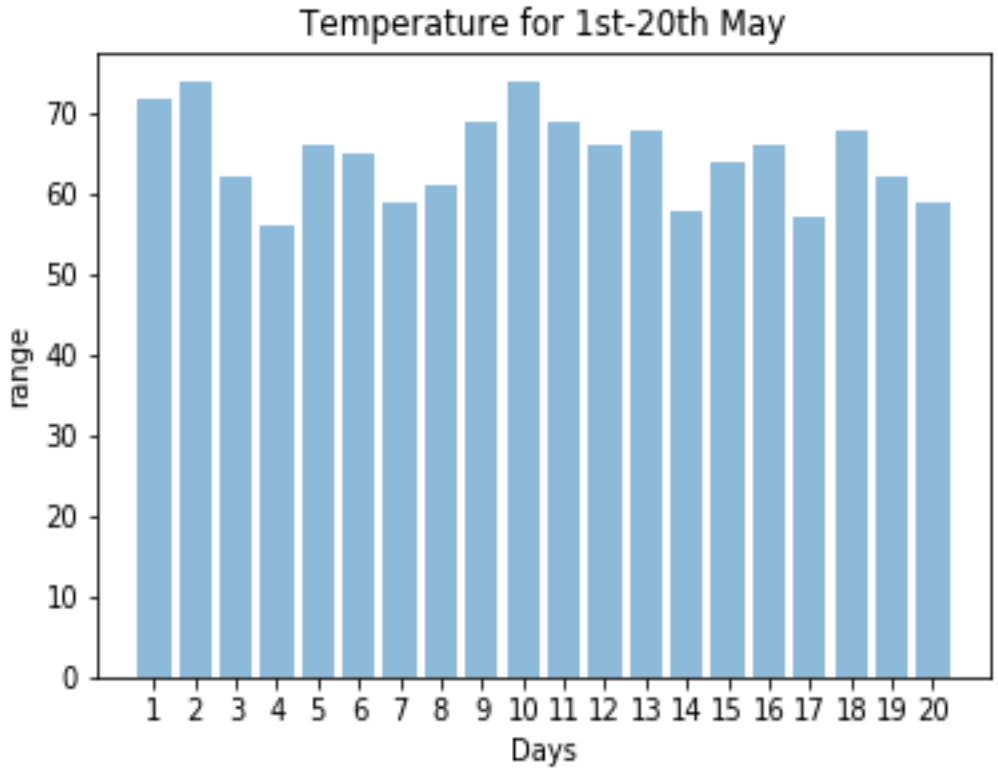
In [**50**]: import matplotlib.pyplot as plt
In [**51**]: import pandas as pd
In [**52**]: data = pd.read_csv("airquality.csv")
In [**53**]: labels = 'Ozone','Solar.R','Wind','Temperature'
In [**54**]: sizes =
[data['Ozone'].mean(),data['Solar.R'].mean(),data['Wind'].mean(),data['Temp'].mean()]
In [**55**]: colors = ['red','gold','purple','brown']
In [**56**]: explode = (0.1, 0, 0, 0)
In [**57**]: plt.pie(sizes, explode=explode, labels=labels, colors=colors,
...: autopct='%1.1f%%', shadow=True, startangle=140)
...: plt.title('Average data')
Out[**57**]: Text(0.5, 1.0, 'Average data')
In [**58**]: plt.savefig('plot1.png')
<Figure size 432x288 with 0 Axes>



BAR PLOT

```
import matplotlib.pyplot as plt

import numpy as np

import pandas as pd

data = pd.read_csv("airquality.csv")

h = data.iloc[1:21,4]

y_pos = np.arange(len(h))

v = range(1,21)

plt.bar(y_pos,h,align = 'center', alpha = 0.5)

plt.xticks(y_pos,v)

plt.ylabel('range')
```

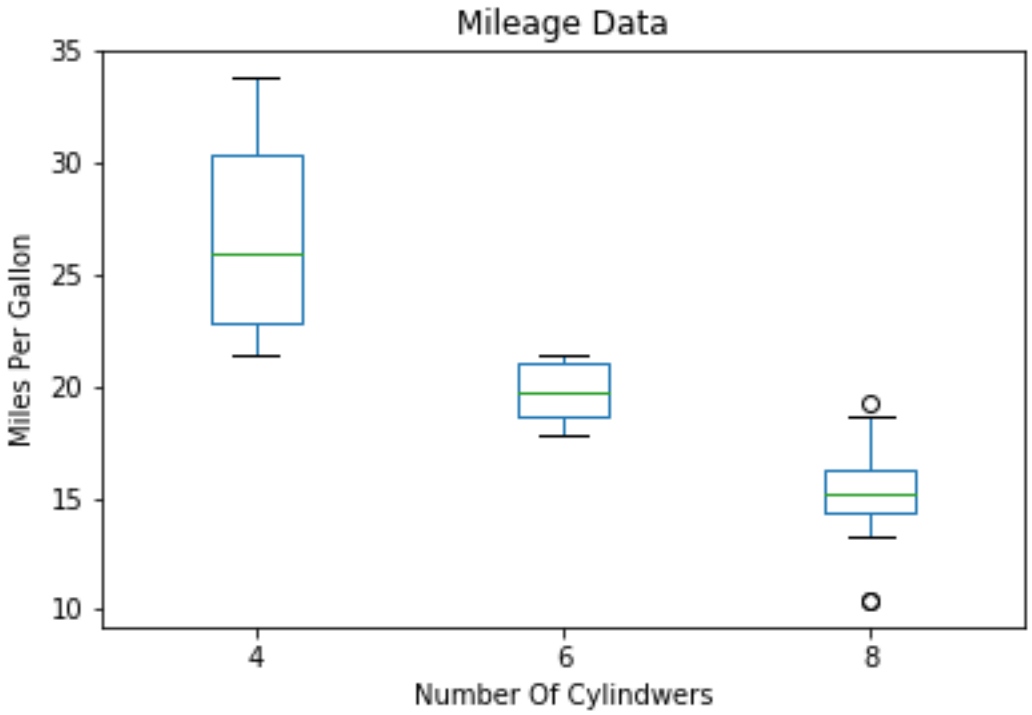
```
plt.xlabel("Days")
plt.title('Temperature for 1st-20th May')
plt.savefig('plot2.png')
plt.show()
```



BOXPLOT

```
import matplotlib.pyplot as plt
import pandas as pd
data = pd.read_csv("mtcars.csv")
data.head()
data.boxplot(by = 'cyl',column = ['mpg'],grid = False)
plt.ylabel("Miles Per Gallon")
plt.xlabel("Number Of Cylindwers")
plt.title("Mileage Data")
plt.suptitle('')
```

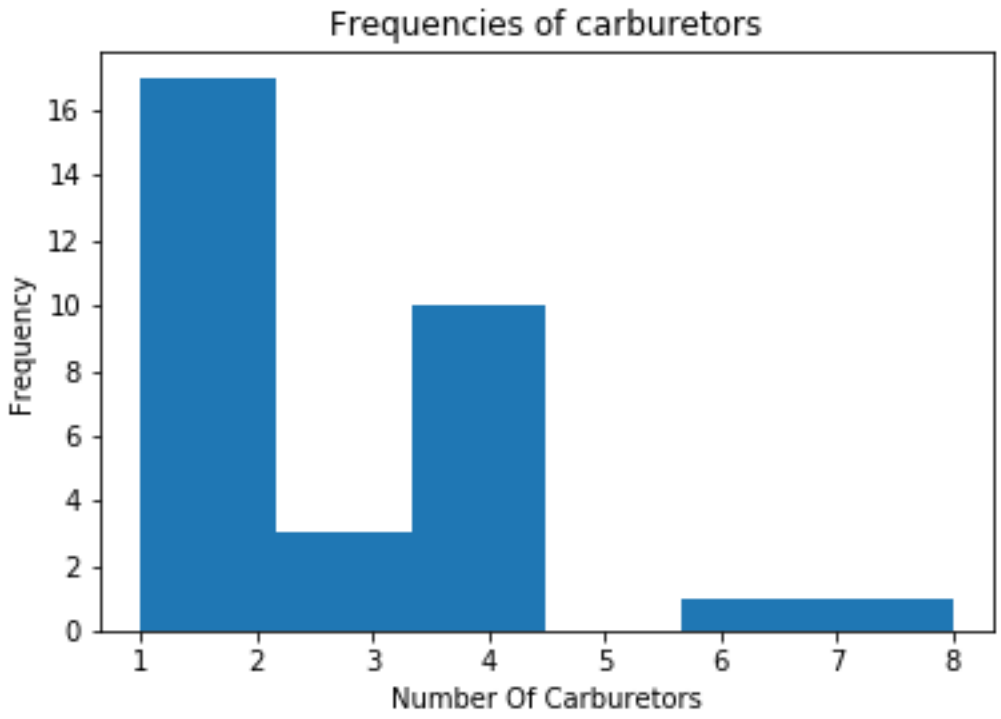
plt.savefig('plot3.png')



HISTOGRAM

```
import matplotlib.pyplot as plt
import pandas as pd
data = pd.read_csv("mtcars.csv")
h = data.iloc[:,-1]
plt.hist(h, bins= 'auto')
plt.title("Frequencies of carburetors")
plt.ylabel("Frequency")
plt.xlabel("Number Of Carburetors")
plt.savefig("plot4.png")
```

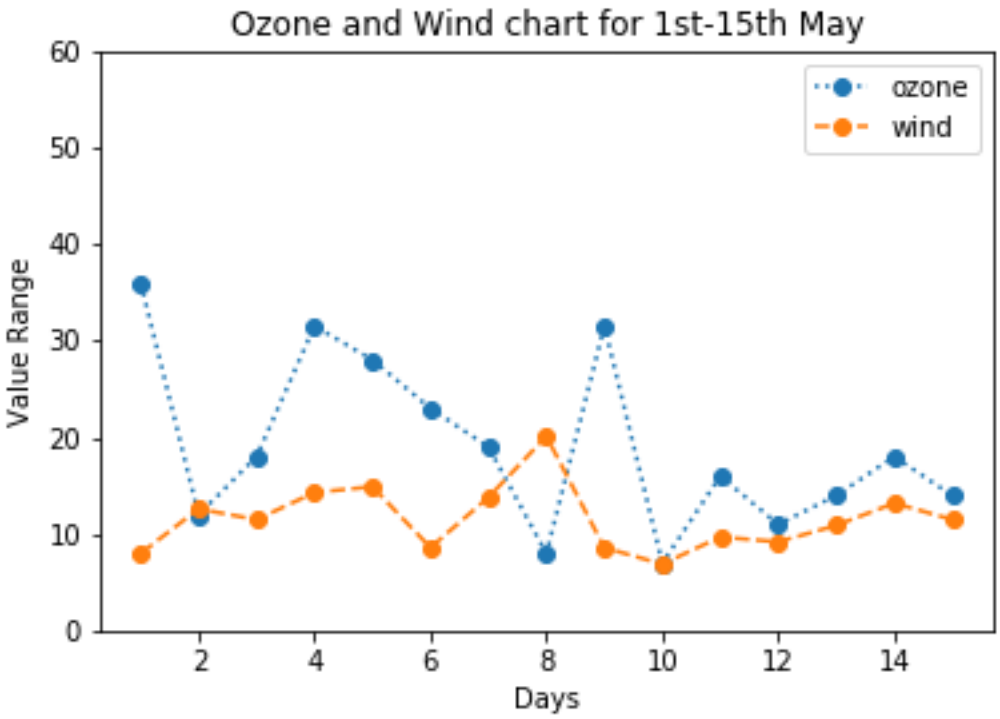
plt.show()



LINE GRAPH

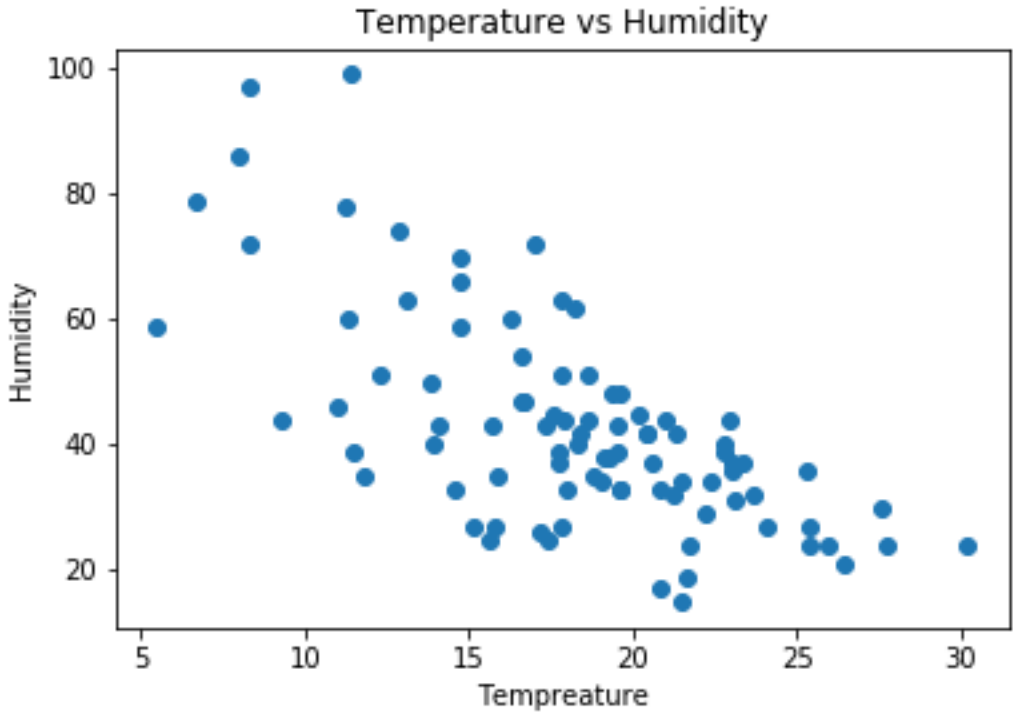
```
import matplotlib.pyplot as plt

import pandas as pd

data = pd.read_csv("airquality.csv")

data["Ozone"].fillna(data['Ozone'].median(),inplace = True)

h = data.iloc[1:16,1]

v = data.iloc[1:16,3]

plt.plot(h,label = 'ozone',marker = 'o',linestyle = "dotted")

plt.plot(v,label = 'wind',marker = 'o',linestyle = "dashed")

plt.ylim(0,60)

plt.legend()

plt.title("Ozone and Wind chart for 1st-15th May")

plt.ylabel("Value Range")

plt.xlabel("Days")

plt.savefig("plot5.png")
```

plt.show()

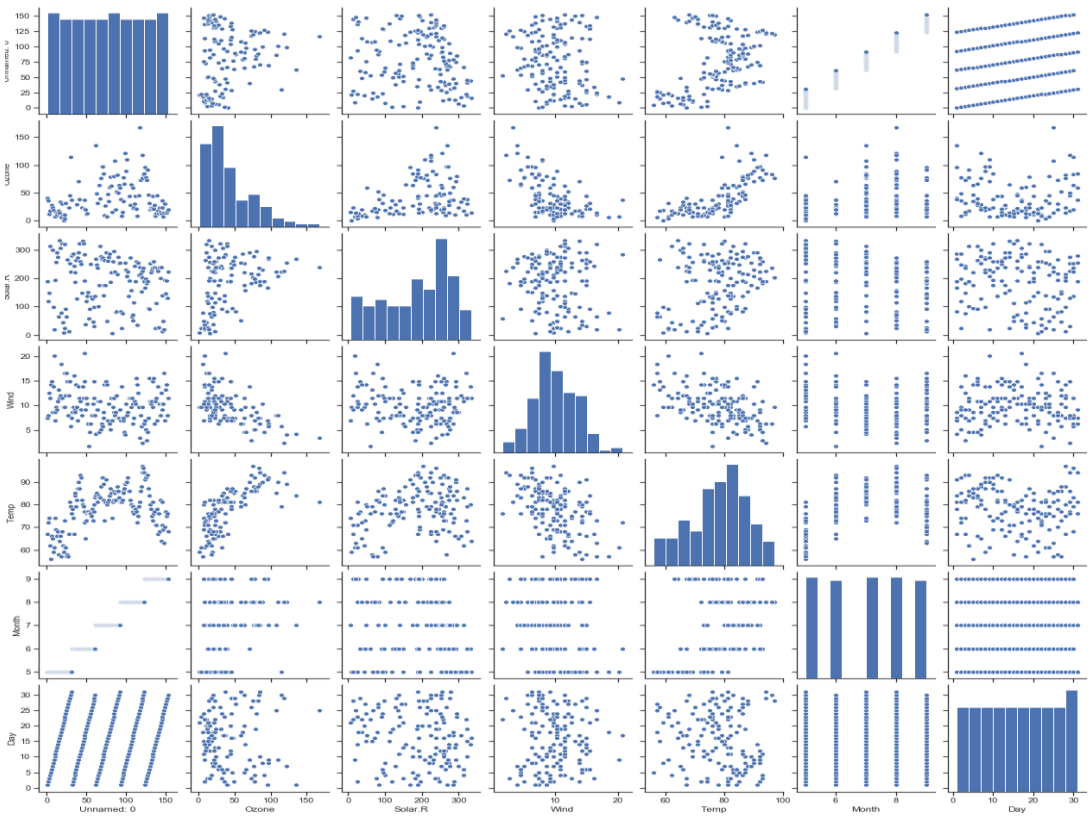


SCATTER PLOT

```
import matplotlib.pyplot as plt
import pandas as pd
data = pd.read_csv("forestfires.csv")
h = data.iloc[1:91,8]
v = data.iloc[1:91,9]
plt.scatter(h,v)
plt.title("Temperature vs Humidity")
plt.xlabel("Tempreature")
plt.ylabel("Humidity")
plt.savefig("plot6.png")
plt.show()
```



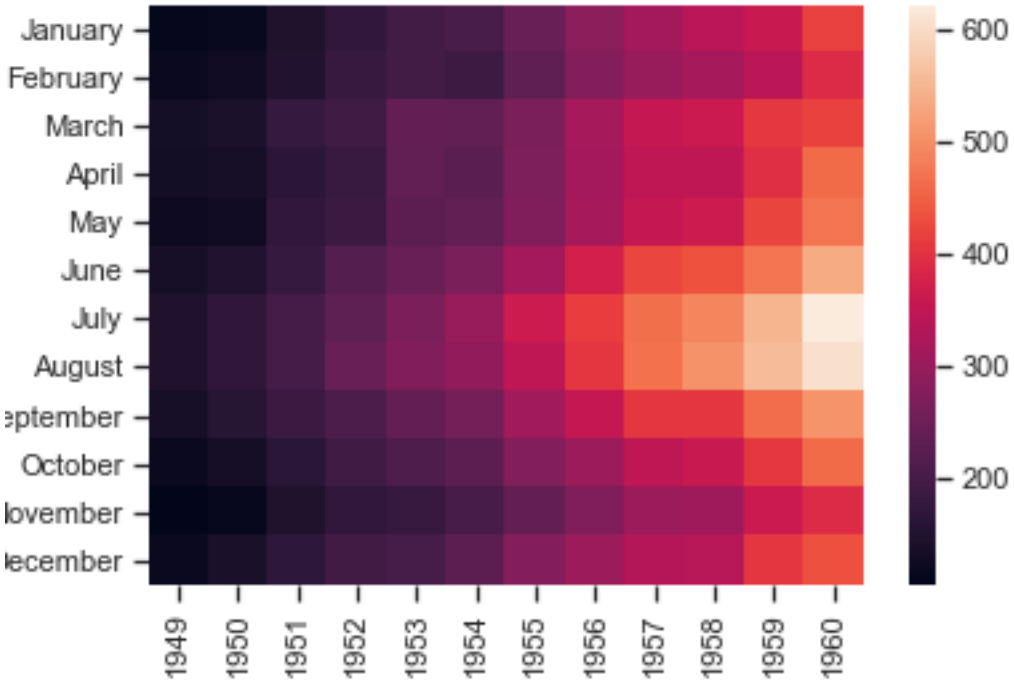

```
import seaborn as sns
import pandas as pd
import matplotlib.pyplot as plt
data = pd.read_csv("airquality.csv")
sns.set(style = "ticks")
sns.pairplot(data)
plt.savefig("plot7.png")
plt.show()
```



HEAT MAP

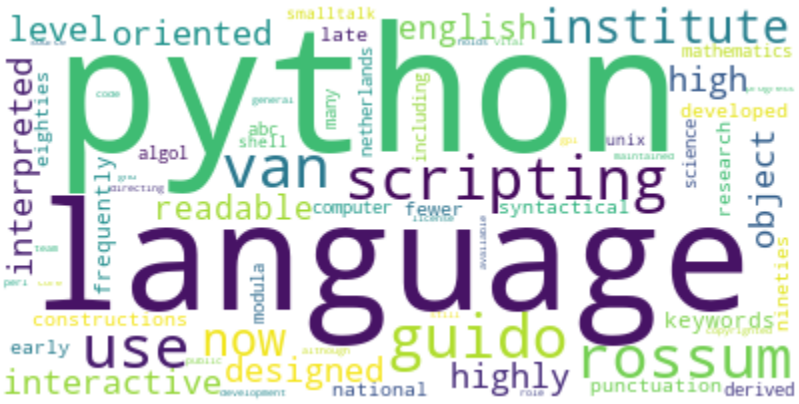
```
import matplotlib.pyplot as plt

import seaborn as sb

flights = sb.load_dataset("flights")

flights = flights.pivot("month", "year", "passengers")

ax = sb.heatmap(flights)
```

plt.savefig("plot8.png")



WORDCLOUD

```
import matplotlib.pyplot as pPlot
from wordcloud import WordCloud, STOPWORDS
import numpy as npy
from PIL import Image
dataset = open("sampleWords.txt", "r").read()
def create_word_cloud(string):
    cloud = WordCloud(background_color = "white", max_words = 200, stopwords = set(STOPWORDS))
    cloud.generate(string)
    cloud.to_file("wordCloud.png")
dataset = dataset.lower()
create_word_cloud(dataset)
```


python
language
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object
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interactive
highly
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derived
mathematics
developed
science
research
unix
algol
shell
abc
smalltalk
late
netherlands
many
including
eighties
frequently
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computer
fewer
syntactical
nineties