

```
In [1]: import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

```
In [2]: data=pd.read_csv(r"C:\Users\user\Desktop\Vicky\4_drug200.csv")
```

```
In [3]: data.shape
```

```
Out[3]: (200, 6)
```

```
In [4]: data.head
```

```
Out[4]: <bound method NDFrame.head of
g
0    23    F    HIGH    HIGH    25.355    drugY
1    47    M    LOW    HIGH    13.093    drugC
2    47    M    LOW    HIGH    10.114    drugC
3    28    F    NORMAL    HIGH    7.798    drugX
4    61    F    LOW    HIGH    18.043    drugY
..    ..    ..    ..    ..    ..    ..
195  56    F    LOW    HIGH    11.567    drugC
196  16    M    LOW    HIGH    12.006    drugC
197  52    M    NORMAL    HIGH    9.894    drugX
198  23    M    NORMAL    NORMAL    14.020    drugX
199  40    F    LOW    NORMAL    11.349    drugX

[200 rows x 6 columns]>
```

```
In [5]: data.tail()
```

```
Out[5]:
```

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
195	56	F	LOW	HIGH	11.567	drugC
196	16	M	LOW	HIGH	12.006	drugC
197	52	M	NORMAL	HIGH	9.894	drugX
198	23	M	NORMAL	NORMAL	14.020	drugX
199	40	F	LOW	NORMAL	11.349	drugX

In [6]: `data.describe()`

Out[6]:

	Age	Na_to_K
count	200.000000	200.000000
mean	44.315000	16.084485
std	16.544315	7.223956
min	15.000000	6.269000
25%	31.000000	10.445500
50%	45.000000	13.936500
75%	58.000000	19.380000
max	74.000000	38.247000

In [7]: `data.isna()`

Out[7]:

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
0	False	False	False	False	False	False
1	False	False	False	False	False	False
2	False	False	False	False	False	False
3	False	False	False	False	False	False
4	False	False	False	False	False	False
...
195	False	False	False	False	False	False
196	False	False	False	False	False	False
197	False	False	False	False	False	False
198	False	False	False	False	False	False
199	False	False	False	False	False	False

200 rows × 6 columns

In [8]: `data.size`

Out[8]: 1200

In [9]: data.isna

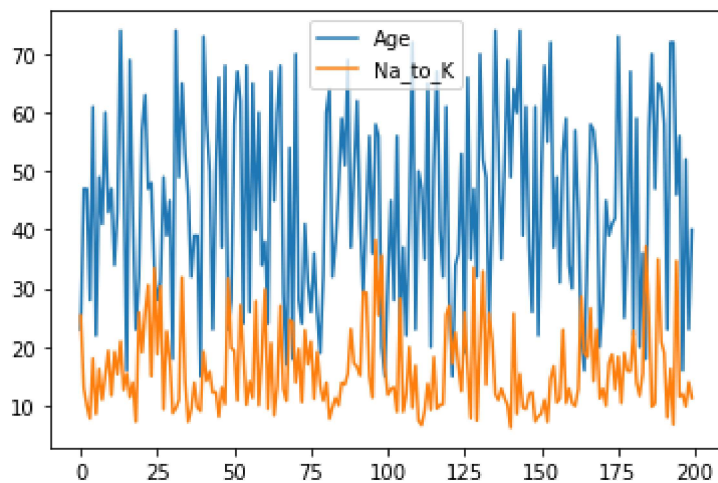
Out[9]: <bound method DataFrame.isna of

	Age	Sex	BP	Cholesterol	Na_to_K	D
rug						
0	23	F	HIGH	HIGH	25.355	drugY
1	47	M	LOW	HIGH	13.093	drugC
2	47	M	LOW	HIGH	10.114	drugC
3	28	F	NORMAL	HIGH	7.798	drugX
4	61	F	LOW	HIGH	18.043	drugY
..
195	56	F	LOW	HIGH	11.567	drugC
196	16	M	LOW	HIGH	12.006	drugC
197	52	M	NORMAL	HIGH	9.894	drugX
198	23	M	NORMAL	NORMAL	14.020	drugX
199	40	F	LOW	NORMAL	11.349	drugX

[200 rows x 6 columns]>

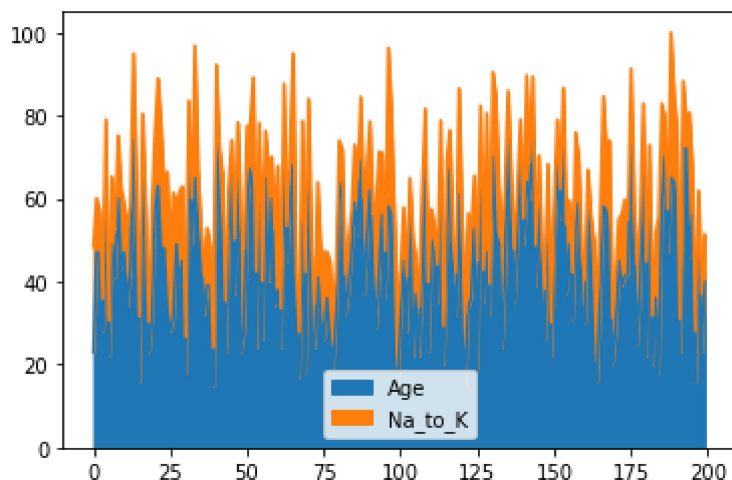
In [10]: data.plot.line()

Out[10]: <AxesSubplot:>



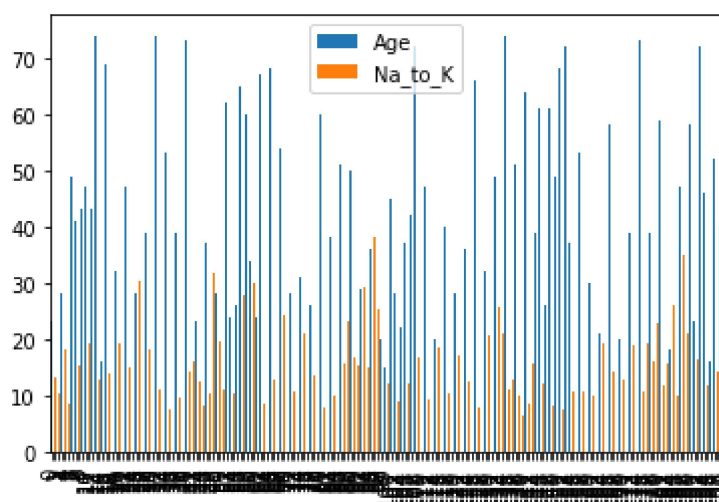
In [11]: data.plot.area()

Out[11]: <AxesSubplot:>



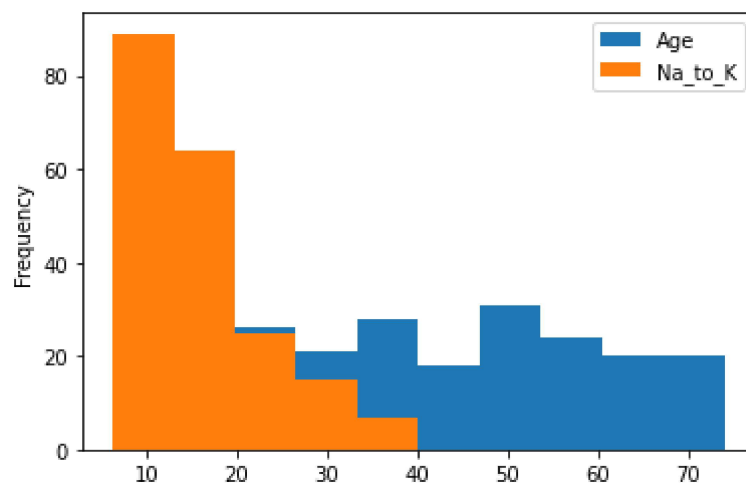
```
In [12]: data.plot.bar()
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```
Out[12]: <AxesSubplot:>
```



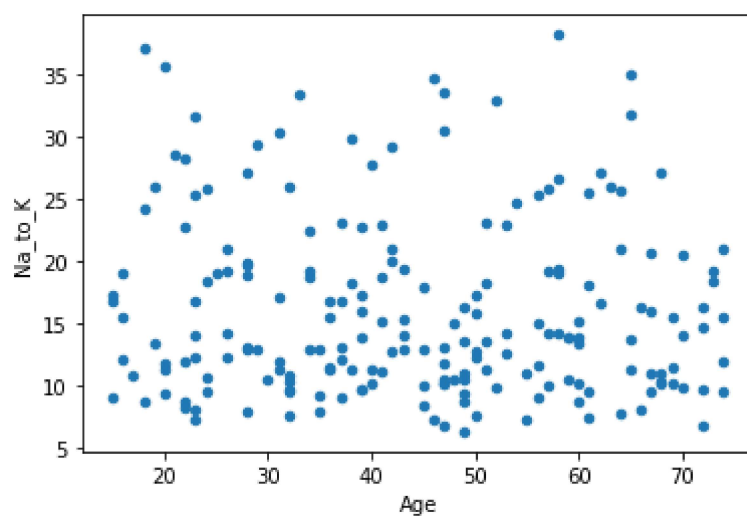
```
In [13]: data.plot.hist()
```

```
Out[13]: <AxesSubplot:ylabel='Frequency'>
```



```
In [15]: data.plot.scatter(x="Age",y='Na_to_K')
```

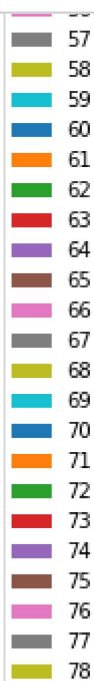
```
Out[15]: <AxesSubplot:xlabel='Age', ylabel='Na_to_K'>
```



```
In [ ]: data.fillna(value=5)
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```
In [ ]: pd.isna(data)
```

```
In [17]: data.plot.pie(y="Age",startangle=90)
```



```
In [ ]:
```

