

```
In [15]: import numpy as np
import pandas as pd
import scipy
from scipy import stats
import seaborn as sns
import matplotlib.pyplot as plt
%matplotlib inline
```

```
In [16]: cutlets = pd.read_csv("Cutlets.csv")
```

```
In [17]: cutlets.head()
```

```
Out[17]:
```

	Unit A	Unit B
0	6.8090	6.7703
1	6.4376	7.5093
2	6.9157	6.7300
3	7.3012	6.7878
4	7.4488	7.1522

```
In [18]: cutlets.tail()
```

```
Out[18]:
```

	Unit A	Unit B
30	6.7794	7.0992
31	7.2783	7.1180
32	7.1561	6.6965
33	7.3943	6.5780
34	6.9405	7.3875

```
In [19]: cutlets.shape
```

```
Out[19]: (35, 2)
```

```
In [21]: UnitA = pd.Series(cutlets.iloc[:,0])
UnitA
```

```
Out[21]:
```

0	6.8090
1	6.4376
2	6.9157
3	7.3012
4	7.4488
5	7.3871
6	6.8755
7	7.0621
8	6.6840
9	6.8236
10	7.3930
11	7.5169
12	6.9246
13	6.8856
14	6.8856
15	6.8856
16	6.8856
17	6.8856
18	6.8856
19	6.8856
20	6.8856
21	6.8856
22	6.8856
23	6.8856
24	6.8856
25	6.8856
26	6.8856
27	6.8856
28	6.8856
29	6.8856
30	6.8856
31	6.8856
32	6.8856
33	6.8856
34	6.8856

```
14 6.5797
15 6.8394
16 6.5970
17 7.2705
18 7.2828
19 7.3495
20 6.9438
21 7.1560
22 6.5341
23 7.2854
24 6.9952
25 6.8568
26 7.2163
27 6.6801
28 6.9431
29 7.0852
30 6.7794
31 7.2783
32 7.1561
33 7.3943
34 6.9405
Name: Unit A, dtype: float64
```

```
In [23]: UnitB = pd.Series(cutlets.iloc[:,1])
UnitB
```

```
Out[23]: 0    6.7703
1    7.5093
2    6.7300
3    6.7878
4    7.1522
5    6.8110
6    7.2212
7    6.6606
8    7.2402
9    7.0503
10   6.8810
11   7.4059
12   6.7652
13   6.0380
14   7.1581
15   7.0240
16   6.6672
17   7.4314
18   7.3070
19   6.7478
20   6.8889
21   7.4220
22   6.5217
23   7.1688
24   6.7594
25   6.9399
26   7.0133
27   6.9182
28   6.3346
29   7.5459
30   7.0992
31   7.1180
32   6.6965
33   6.5780
34   7.3875
Name: Unit B, dtype: float64
```

```
In [25]: # Hence it is an two tailed test
p_value = stats.ttest_ind(UnitA,UnitB,alternative = "two-sided")
```

p_value

```
Out[26]: Ttest_indResult(statistic=0.7228688704678063, pvalue=0.47223947245995)
```