

```
In [1]: import pandas as pd
import numpy as np
from scipy import stats
from scipy.stats import norm
```

```
In [2]: # Load the dataset
data=pd.read_csv('Cutlets.csv')
data.head()
```

Out[2]:

| | 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 [3]: unitA = pd.Series(data.iloc[:,0])  
unitA
```

```
Out[3]: 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     6.9256  
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 [4]: unitB = pd.Series(data.iloc[:,1])
unitB
```

```
Out[4]: 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 [5]: # 2-sample 2-tail ttest:  stats.ttest_ind(array1,array2)      # ind -> independent
p_value = stats.ttest_ind(unitA,unitB)
p_value
```

```
Out[5]: Ttest_indResult(statistic=0.7228688704678063, pvalue=0.4722394724599501)
```

```
In [6]: p_value[1]      # 2-tail probability
```

```
Out[6]: 0.4722394724599501
```

```
In [7]: # compare p_value with  $\alpha = 0.05$  (At 5% significance level)
```

```
In [ ]:
```

