Day 4 - Statistics - CHI Square Test_by_Virat Tiwari

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1 CHI Square Test

[14]:
```
# Scipy library is used for statistical operations

import scipy.stats as stat
import numpy as np
```

[15]:
```
# No of hours students study in a weekly basis daily
# Mon,Tue,Wed,Thu,Fri,Sat,Sun

expected_data=[8,6,7,9,6,9,7]
observed_data=[7,8,6,9,9,6,7]
```

[16]:
```
sum(expected_data),sum(observed_data)
```

[16]: (52, 52)

[17]:
```
## CHI Square Goofness of Fit Test

chisquare_test_statistics,p_value=stats.chisquare(observed_data,expected_data)
```

[18]:
```
chisquare_test_statistics,p_value
```

[18]: (3.4345238095238093, 0.7526596580922865)

[24]:
```
## Find the critical value

significance_value=0.05
dof=len(expected_data)
print(dof)
critical_value=stat.chi2.ppf(1-significance_value,dof)
```

7

[25]:
```
critical_value
```

[25]: 14.067140449340169

[27]:
```
if chisquare_test_statistics>critical_value:
    print("Reject the null hypothesis")
else:
    print("Accept the null hypothesis")
```

```
Accept the null hypothesis
```

[ ]: