1. Business Objective: CustomerOrderForm

Ho: Defective % does not varies from centers

Ha: Defective % varies from Centers

Data:

Y: Discrete X: Discrete

Compare more than 2 populations with each other.

Test: Chi Squared test

1. Business Objective : Faltoons

Ho: % of Male and Female walking in store do not vary

Ha: % of Male and Female walking in store vary

Data:

Y: Discrete X: Discrete

Compare 2 populations with each other.

Test : 2 Proportion test

Ho: Male % verses female % in weekday = male % verses Female % in weekend

Ha : Male % verses female % in weekday not = male % verses Female % in weekend

P value = 0.9681 >0.05 => P high Ho Fly

Conclusion:

Male verses female in weekday is equal to Male and female in weekend.

1. Business Objective: Cutlets

Ho: Diameter of Unit A same as Diameter of Unit B

Ha: Diameter of Unit A not same as Diameter of Unit B

Data:

Y: Continuous X: Discrete 2

Normality Test: Shapiro.test

Ho: Data is normally distributed

Ha: Data is not normally distributed

Unit A : P value= 0.32 >0.05 so P high Ho fly =>data is normally distributed

Unit B : P value= 0.52 >0.05 so P high Ho fly =>data is normally distributed

External Condition is same for Unit A and Unit B

Test:

Paired T Test

Ho: Unit A =Unit B

Ha: Unit A!=Unit B

P value =0.4562 >0.05 P high Ho fly

Conclusion: There is no difference in diameter in Unit A and Unit B Cutlets they both are same.

1. Business Objective: LabTAT

Ho: TAT of Sample Mean = TAT of Population Mean

Ha: TAT of Sample Mean! = TAT of Population Mean

Data:

Y: Continuous X: Discrete>2

Normality Test: Shapiro.test

Ho: Data is normally distributed

Ha: Data is not normally distributed

Laboratory 1 = 0.558, Laboratory 2 = 0.863, Laboratory 3 =0.4205 , Laboratory 4 = 0.6619 all 4 values are >0.05 => data is normally distributed

All Variance are equal

Test: One way ANOVA test

Ho: No difference in average TAT among the different laboratories

Ha: There is a difference in average TAT among the different laboratories

P-value = 2e-16 <0.05 so Reject Ho.

Conclusion: There is a difference in average TAT among the different laboratories

1. Business Objective:BuyerRatio

Ho: Proportion of male-female across regions is same

Ha: Proportion of male-female across regions is not same

Data:

Y: Discrete

X: Input is 4 Discrete variable >2

Compare more than 2 populations with each other.

Test: Chi Squared test

P value =0.66

P-value>0.05.Hence we fail to reject Null.

**Hence proportion of male and female across regions is same**