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/Users/bps/PycharmProjects/hypothesis_tesing/venv/bin/python /Users/bps/PycharmProjects/hypothesis_tesing/main.py


Welcome to the Hypothesis Testing calculator made by ALIAS GEORGE

Select the Calculator (type the no corresponding eg 1 for one mean Large sample)

1. One Mean Large sample n > 30
2. One Mean Small sample (σ unknown)
3. Two Mean Large sample n1 , n2 > 30
4. Two Mean Small sample with both normal and σ1 = σ1
5. Matched Pair t-Test
6. One Variance Test
7. Two Variance Test
8. One Proportion Test
9. Multi Proportion Test
10. Two Proportion Difference Test
11. R and C Analysis Test (Dependence Test)
12. Goodness Fit Test
12


12. Goodness Fit Test



Select the Calculator

Discrete Distribution
1. Goodness Fit for Poisson Test
2. Goodness Fit for Binomial Test
3. Goodness Fit for Geometric Test
4. Goodness Fit for Hyper Geometric Test
5. Goodness Fit for Uniform Discrete Test

Continuous Distribution
6. Goodness Fit for Normal Test
7. Goodness Fit for Log Normal Test
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8. Goodness Fit for Alpha Test
9. Goodness Fit for Beta Test
10. Goodness Fit for Gamma Test
11. Goodness Fit for Weibull Test
12. Goodness Fit for Exponential Test
13. Goodness Fit for Uniform Continuous Test
12



12. Goodness Fit for Exponential Test



Level of significance: 0.01
Enter the parameter λ: 0.025
Enter the no of Categories : 5

Does the interval is a continuous one ? eg: <10 , 10 <20 etc
1. yes
2. no
1



Enter the Enter the Highest of each interval_0: 20
Enter the Observed Frequency for interval_0: 46



Enter the Enter the Highest of each interval_1: 40
Enter the Observed Frequency for interval_1: 19



Enter the Enter the Highest of each interval_2: 60
Enter the Observed Frequency for interval_2: 17



Enter the Enter the Highest of each interval_3: 80
Enter the Observed Frequency for interval_3: 12
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Enter the Lowest of Interval of_4: 80
Enter the Observed Frequency for Interval of_4: 6

X	Observed Frequency	Exponential Probabilities of Interval area	Expected Frequency
< 20	46	0.3935	39.35
20 < 40	19	0.2387	23.87
40 < 60	17	0.1447	14.469999999999999
60 < 80	12	0.0878	8.780000000000001
80 >	6	0.1353	13.530000000000001

Combined categories (initial,final) []

Observed Frequency	Exponential Probabilities of Interval area	Expected Frequency	Contribution to χ^2
46	0.3935	39.35	1.124
19	0.2387	23.87	0.994
17	0.1447	14.469999999999999	0.442
12	0.0878	8.780000000000001	1.181
6	0.1353	13.530000000000001	4.191

Null hypothesis: Random variable has a Exponential distribution with λ = 0.025.
Alternative hypothesis: Random variable does not have the Exponential distribution with λ = 0.025.

Calculations

Total Chi_square: 7.932

Decision
The null must be rejected if χ^2 > 13.2767

Since χ^2 = 7.932 does not exceed 13.2767, the null hypothesis cannot be rejected; we cannot reject that the Exponential distribution with λ = 0.025 provides a good fit at level α = 0.01.

Process finished with exit code 0