Statistical Hypothesis Testing with Z-test and T-test Run statistical_hypothesis.py to start the GUI application. Statistical Hypothesis Testing Hypotheses Sample -Load data from CSV- $\bar{x} = 1005.00$ σ = 20.00 **-**-H₀: µ ≤ ∨ 1000.00 --OR--**+** H₁: μ > ∨ 1000.00 -Load data from CSV-O Values = [1.4,2.1,3.7 Calculation Margin of error Distribution Feature sample size Calculate 0.0100 💠 Normal ○ Student's t 1.0000 100 💠 Statistical Hypothesis Testing Hypotheses Sample σ = 20.00 $\bar{x} = 1005.00$ **+** n = 196 -H₀: µ ≤ ∨ 1000.00 --OR--**+** H₁: μ > ∨ 1000.00 O Values = [1.4,2.1,3.7 Calculation Margin of error Distribution Feature sample size Calculate 0.0100 1.0000 Normal O Student's t 100 💠 Result **Standard mode** Solution (dust emission, known σ, slide 77) Test: right tailed Rule: Reject Ho if 3.500 z = 3.500 $z_a = 2.326$ H₀ rejected Conclusion: Accepted H₁ Interval: (1001.6766 - inf) Statistical Hypothesis Testing X Hypotheses Sample $\bar{x} = 1005.00$ $\bar{x} = 2.30$ H₀: μ = \vee 1000.00 --OR--H₁: μ != ∨ 1000.00 O Values = [1.4,2.1,3.7 Calculation Margin of error Distribution Feature sample size Minimal sample count mode Calculate 0.0500 🕏 1.5000 (length of spaghetti strand, unknown σ , slide 106) Result Solution two tailed Test: Rule: Reject Ho if $|t| > t_a$ t = 6.875 $t_a = 2.262$ H₀ rejected Conclusion: Accepted H₁ Interval: (1003.3547 - 1006.6453) Min. sample count: 12.031 ≈ 13 × Statistical Hypothesis Testing Hypotheses Sample $\bar{x} = 1005.00$ σ = 2.30 1000.00 --OR--H₁: μ != ∨ 1000.00 O Values = [1.4,2.1,3.7 Calculation Distribution Margin of error Feature sample size Calculate Confidence interval for probability mode Normal Student's t 20 💠 (length of spaghetti strand, unknown σ , slide 102) Result

Solution

Test:

Rule: Reject Hoif

Conclusion:

two tailed

 $|z| > z_a$

 $z_a = 1.960$

H₀ rejected

Accepted H₁

(1004.6812 - 1005.3188)

Conf. interval for prob.: Proportion: 0.100 0.0584 — 0.1416