

Statistical Inference Summary

● Confidence Intervals

- **One Parameter:**
 - One Proportion (p)
 - Calc: **1PropZInt**
 - One Mean (μ)
 - Calc: **TInterval**
 - One Variance (σ^2)
 - Calc: **None** (compute using formulas)
 - One Standard Deviation (σ)
 - Calc: **None** (compute using formulas)
- **Two Parameters:**
 - Two Proportions (difference of two proportions $p_1 - p_2$)
 - Calc: **Independent: 2PropZInt**
 - Calc: **Dependent N/A**
 - Two Means (difference of two means $\mu_1 - \mu_2$)
 - Calc: **Dependent: ($\mu_d, \bar{d}, s_d$) T-Interval**
 - Calc: **Independent: 2-SampTInt**

● Hypothesis Tests

- **One Parameter:**
 - One Proportion (p)
 - Calc: **1PropZTest**
 - One Mean (μ)
 - Calc: **T-Test**
 - One Variance: **N/A**
 - One Standard Deviation: **N/A**
- **Two Parameters:**
 - Two Proportions (difference of two proportions $p_1 - p_2$)
 - Calc: **Independent: 2PropZTest**
 - Calc: **Matched-Pairs (Dependent): N/A** (use χ^2 cdf() & test stat)
 - Two Means (difference of two means $\mu_1 - \mu_2$)
 - Calc: **Dependent: ($\mu_d, \bar{d}, s_d$) T-Test**
 - Calc: **Independent: 2-SampTTest**
- **Three or More Parameters:**
 - Three or More proportions ($p_1, p_2, \dots, p_k$)
 - Calc: **Categorical Data: χ^2 -GOF-Test**
 - Test for Independence of Categorical Data
 - Calc: **Categorical Data: χ^2 -Test** (& Matrix [A] ($2nd+x^{-1}$))
 - Three or More means ($\mu_1, \mu_2, \dots, \mu_k$)
 - Calc: **Independent: ANOVA**

Requirements Check (To Do: work in progress...)

• Confidence Intervals

- **One** Parameter:
 - One Proportion (p)
 - Requirements:
 - One Mean (μ)
 - Requirements:
 - One Variance (σ^2)
 - Requirements:
 - One Standard Deviation (σ)
 - Requirements:
- **Two** Parameters:
 - Two Proportions (difference of two proportions $p_1 - p_2$)
 - Requirements: : Independent:
 - Requirements: : Dependent
 - Two Means (difference of two means $\mu_1 - \mu_2$)
 - Requirements: : Dependent: ($\mu_d, \bar{d}, s_d$)
 - Requirements: : Independent:

• Hypothesis Tests

- **One** Parameter:
 - One Proportion (p)
 - Requirements:
 - One Mean (μ)
 - Requirements:
 - One Variance: N/A
 - One Standard Deviation: N/A
- **Two** Parameters:
 - Two Proportions (difference of two proportions $p_1 - p_2$)
 - Requirements: Independent:
 - Requirements: Matched-Pairs (Dependent):
 - Two Means (difference of two means $\mu_1 - \mu_2$)
 - Requirements: Dependent: ($\mu_d, \bar{d}, s_d$)
 - Requirements: Independent:
- **Three or More** Parameters:
 - Three or More proportions ($p_1, p_2, \dots, p_k$)
 - Requirements: Categorical Data:
 - Test for Independence of Categorical Data
 - Requirements: Categorical Data:
 - Three or More means ($\mu_1, \mu_2, \dots, \mu_k$)
 - Requirements: Independent: