

Applied Epistemology:

A Framework for how we know things scientifically.

A Refresher on Learning Path I: Hypothesis Testing

Agenda:

1. H_0/H_A : Our model of the test universe (the distribution of the variable)
2. Test & assumptions: are the assumptions met? Is the test valid?
3. Quantitative evidence: **p-value**, or critical value.
 - False positive = Type I (α), False Negative = Type II (β), Type III errors
 - Sensitivity, Specificity, Power \rightarrow confusion matrix, ROC/AUC curve
 - Confusion Matrix
4. Conclusion & uncertainty/estimation
5. **Z-scores, χ^2 Goodness-of-fit test, and χ^2 Contingency test**

Start Building your own flowchart

Flow chart: which test statistic should you use?

