

Understanding Significance

Learning objective: You'll correctly interpret p-values, confidence intervals, sample size, and MDE, distinguish statistical from practical significance, and avoid the most costly misinterpretations of test results.

Key Takeaways

- The p-value measures the probability of a chance result, not the probability that the hypothesis is true.
- Ninety-five percent significance and sufficient conversions are the JDKRUEGER&CO minimum.
- Statistical significance without practical relevance doesn't justify a rollout.
- The p-value measures the probability of chance, not the probability of the hypothesis.
- The confidence interval shows the range of the true effect.
- Statistical significance alone is not enough to justify a rollout.

Framework steps

1. Check the p-value
2. Read the confidence interval
3. Assess the MDE
4. Make a decision
5. Calculate the effect
6. Estimate costs
7. Assess the risk

Key points at a glance

CONCEPT

The p-value: a probability statement

The p-value answers this question: what's the probability of seeing the observed difference if there's actually no effect at all?

CONCEPT

Why 95% is the JDKRUEGER&CO minimum

95% significance corresponds to a p-value of 0.05 or lower.

most likely lives

A 95% confidence interval gives you a range for the true effect.

automatically mean important

A +1% uplift can be statistically significant if you have enough data.

CONCEPT

Practical Significance: When Does It Actually Count?

Practical significance asks: Does the effect justify the effort and the risk?

MISCONCEPTION

Common Misinterpretations

Mistake one: Significance is the probability that the hypothesis is true.

How to use this job aid: Use it as a quick reference before you tackle a campaign, an audit, or a strategy decision. The takeaways and the decision matrix help you focus quickly and avoid common mistakes.