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Summary of Foundations in Statistical Testing

In this lesson, you learned some core terminology used in statistical testing. You learned about the null and alternative hypotheses, and that you can reject the null hypothesis, or not reject the null.

You learned about probability values and that p-values measure the strength of the evidence against your null hypothesis. You learned that you establish a cutoff, or the significance level, beyond which you reject the null hypothesis. This cutoff, alpha, is often set at 0.05, but you, the analyst, determine the risk of a false rejection that you are willing to accept. Finally, you learned about Type I errors (or false positives) and Type II errors (or false negatives).

In the next lesson, you learn about hypothesis tests involving one mean, two means, and many means, with an emphasis on the application of these tests to real problems. You also learn about equivalence testing, tests for variances (or unequal variances), and how to compare many means. For these methods, the focus is on statistical decision-making with continuous data.

We cover some core methods, known as "parametric tests." However, there are many additional tests that can be used.

For example, there are numerous "nonparametric tests" that might be useful, depending on your data and the question you are asking. There are also analogous tests for categorical data, which aren't covered in this course.

For more information about nonparametric tests and statistical tests for categorical data, see the Read About It for this module.

Close