# P value & Alpha

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# P Value

A p-value is a measure of the probability that an observed difference could have occurred just by random chance.

Smaller the p value, better are the chances of rejecting the Null Hypothesis, while bigger the p value, better are the chances of accepting Null Hypothesis.

Eg — If the P value is 0.05, it means that if we do the statistical tests 'n' times, only 5% of the times we will get something other than the Null Hypothesis.

Like for p = 0.05, if we do a statistical test 1000 times, 950 times I will land on Ho while 50 times, I will land on Ha( Alternative Hypothesis )

# Alpha

- The alpha value is a criterion for determining whether a test statistic is statistically significant.

- It is the P-Value for our Population on which the Null Hypothesis was made.

- This is the metric with which we will compare our calculated P-value with whether to accept or reject Null Hypothesis.

- **If calc p value is less than or equal to Alpha, we reject Null Hypothesis. If calc p value is greater than Alpha, we accept Null Hypothesis**

# Thank You for reading!!!

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