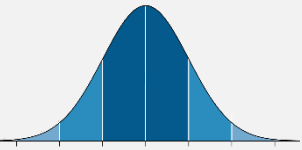# THE TOP FIVE
STATISTICS TOOLS

TOOL #1

Normal Distribution

There are lots of distributions out there in the world. While countless time can be spent learning all of them, I feel the two most vital things to know are: 1. always remember that distributions are associated with data (not charts) and 2. know your Normal Distribution like the back of your hand and stats will be your friend.
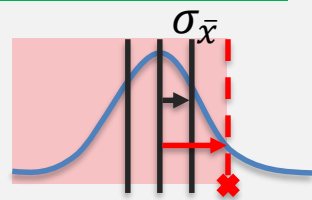
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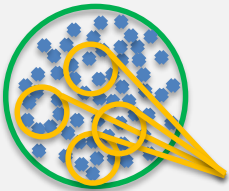
Central Limit Theorem

Often called the most important theorem of mathematics, the CLT establishes a fundamental principle in statistics: a sampling distribution is always normal regardless of the distribution in the underlying population. This fact alone has allowed hundreds of thousands of scientific breakthroughs to happen.

TOOL #3

Hypothesis Testing / Statistical Significance

$\sigma_{\bar{x}}$

Hypothesis testing along with Statistical Significance are the underlying principles propelling the majority of modern day research. But they aren't just important for research – both of these concepts have to be used in business analytics if we want to make business decisions based on valid insights.
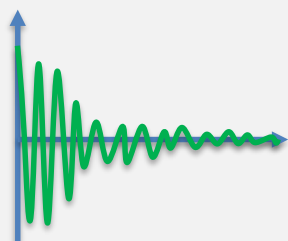
TOOL #4
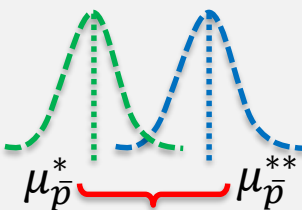
Confidence Intervals

Another very important statistical method – estimating probable ranges for population parameters based on what we can observe from samples. This approach is also widely used in research and business alike. Seasoned executives expect to see important insights accompanied by confidence intervals.

$\mu_{\bar{p}}^{*}$ $\mu_{\bar{p}}^{**}$

TOOL #5

Law Of Large Numbers

My favourite and, hands down, the most intuitive and at the same time useful law of mathematics. In layman terms, LLN states that the larger your sample, the closer will a statistic of your sample be to the expected value for that statistic. A very powerful principle and one which I apply in my daily life.

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