Piled Higher and Deeper *by Jorge Cham*

ANOVA: ANALYSIS OF VALUE

IS YOUR RESEARCH WORTH ANYTHING?

Developed in 1912 by geneticist R.A. Fisher, the Analysis of Value is a powerful statistical tool designed to test the significance of one's work.

am i wasting my time?

Significance is determined by comparing one's research with the **Dull Hypothesis**:

$$H_0 : \mu_1 = \mu_2 \ ?$$

where,

H_0 : the Dull Hypothesis

μ_1 : significance of your research

μ_2 : significance of a monkey typing randomly on a typewriter in a forest where no one hears it.

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The test involves computation of the $F'd$ ratio:

$$F'd = \frac{\text{sum(people who care about your research)}}{\text{world population}}$$

This ratio is compared to the F distribution with I-1, N_1 degrees of freedom to determine a $p(in\ your\ pants)$ value. A low $p(in\ your\ pants)$ value means you're on to something good (though statistically improbable).

Type I/II Errors

The Analysis of Value must be used carefully to avoid the following two types of errors:

Type I: You incorrectly believe your research is not Dull.

Type II: No conclusions can be made. Good luck graduating.

Of course, this test assumes both Independence and Normality on your part, neither of which is likely true, which means *it's not your problem*.

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