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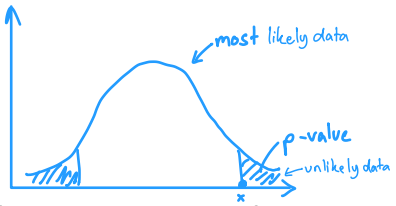
EE325 Section 1: Online Quiz#1

** Required only for those who did not do the in-class quiz on Mar 12th, 2020.

** Due 12noon on Friday 13rd March, 2020. Please submit via Moodle.

1) Why do we have to calculate the t-statistics when doing hypothesis test?
T-values are a type of test statistics. Hypothesis test uses the test statistic that is calculated from the sample to compare the sample to the null hypothesis. If the test statistic is extreme enough, so it is indicates that the data are incompatible with null hypothesis that we can reject the null.

2) What is the p-value? Draw a graph to accompany your explanation.
The p-value is the probability of obtaining result as extreme as the observed results of a statistical hypothesis test. The p-value is used as an alternative to rejection point to provide the smallest level of significance at which the null hypothesis would be rejected



• According to the graph, we can implies that the smaller p-value is the stronger evidence to represent the hypothesis.

3) What is a 95% confidence interval? How do we calculate it?

95% confidence interval is we have 95% to failed to reject H_0. Then, there only 5% interval to reject $H_0 (D \neq 0)$. To calculate it, suppose we use t-test at degree freedom n-k-1, then we find the value of T at this degree freedom of 95%, we will find 2 value, which contains positive and negative. The interval between positive and negative are 95% interval.

========== END OF THE QUIZ ==========