Hypothesis Helper Manual

The Hypothesis Helper is a program written in C# to assist in statistically verifying hypotheses using Welch t-Test and Pearson Correlation tests. It also has Chauvenet outlier removal as an option for non-paired data. It can perform both One and Two Sample Welch t-tests and shows both one and two tailed(sided) results. Numerous other useful calculations are included such as P-value, R-value, t-value, Standard Deviation, Standard Error, Confidence Interval, Sigma Level and Mean Difference. For paired data a normalized scatter plot is also provided for visualization of data patterns. Input is via comma or line separated values.

**Instructions:**

1. Enter comma or line separated values into the “A Data” box.
2. Either enter comma or line separated values into the “B Data” box for a Two Sample test OR supply a Predicted Mean value for a One Sample test.
3. Enter a Confidence Level OR leave the 95% default.
4. Check Paired Data if the data values are paired
5. Check Outlier Removal if you want to perform a Chauvenet outlier removal filter on the data prior to performing calculations.
6. Click Calculate.
7. The results appear in the black box at the bottom.

**Note:** Paired Welch t-test, Pearson test and Scatter Plot results are only shown if data is paired, i.e. has equal number of entries and Paired Data? is checked. Only non-paired t-Test results are shown after Chauvenet outlier removal as pairing is no longer possible once values are thrown out.