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. Click Calculate.
5. 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. Only non-paired t-Test results are shown after Chauvenet outlier removal as pairing is no longer possible once values are thrown out.

As the program simply performs all of the calculations every time, it is up to you to know what data is relevant to your particular situation.