Business Problem

Investigate a classic phenomenon from experimental psychology called the Stroop Effect. Form a hypothesis regarding the outcome and communicate the results in terms of the hypothesis.

Variables

The independent and dependant variables are

What is our independent variables and dependent variables

1. What is our independent variable? What is our dependent variable?

Hypothesis and Statistical Tests

What is an appropriate set of hypotheses for this task

2. What is an appropriate set of hypotheses for this task? What kind of statistical test do you expect to perform? Justify your choices.

Descriptive Statistics

3. Report some descriptive statistics regarding this dataset. Include at least one measure of central tendency and at least one measure of variability.

Plots and Visualizations

4. Provide one or two visualizations that show the distribution of the sample data. Write one or two sentences noting what you observe about the plot or plots.

5. Now, perform the statistical test and report your results. What is your confidence level and your critical statistic value? Do you reject the null hypothesis or fail to reject it? Come to a conclusion in terms of the experiment task. Did the results match up with your expectations?

6. Optional: What do you think is responsible for the effects observed? Can you think of an alternative or similar task that would result in a similar effect? Some research about the problem will be helpful for thinking about these two questions!

As a general note, be sure to keep a record of any resources that you use or refer to in the creation of your project. You will need to report your sources as part of the project submission.

Now it’s your chance to try out the Stroop task for yourself. Go to [this link](https://www.google.com/url?q=https://faculty.washington.edu/chudler/java/ready.html&sa=D&ust=1494878518381000&usg=AFQjCNFRFvrbrgq5A59RW1cRa8WV5ORVNw), which has a Java-based applet for performing the Stroop task. Record the times that you received on the task (you do not need to submit your times to the site.) Now, download [this dataset](https://www.google.com/url?q=https://drive.google.com/file/d/0B9Yf01UaIbUgQXpYb2NhZ29yX1U/view?usp%3Dsharing&sa=D&ust=1494878518382000&usg=AFQjCNGrJJt878AFyonXRCTkzQZRvM3LQA) which contains results from a number of participants in the task. Each row of the dataset contains the performance for one participant, with the first number their results on the congruent task and the second number their performance on the incongruent task.