Lab 1 Writing Assignment

Figures and Captions

## Writing Assignment

In this writing assignment you will create a figure, write a caption for it, and write a paragraph of text to reference and explain the figure. In doing this, you will learn how to create a well-designed figure to clearly and effectively present captured data. You will also learn how to refer to the figure in supporting text by writing a short paragraph to explain the signficance of the data and the important takeaways.

## Learning Objectives

By the end of this writing assignment you will…

* Learn how to design a clear figure
* Understand what information should be in the figure, figure caption, and text referencing the figure.

## Required Resources

* ☐ Data from Lab 1
* ☐ Code used to process and plot Lab 1 data
* ☐ Figure generated from Lab 1

## Specifications

### Figure Design

* ☐ Y-axis label is clear and descriptive of the dependent variable
* ☐ X-axis label is clear and descriptive of the independent variable
* ☐ All axis ticks are
* ☐ Graph is easily readable (e.g., appropriate fonts, line weights and data markers and not overly cluttered)
* ☐ Legend is present and well-placed (e.g., no on top of any data)
* ☐ Correct units in the labels for both axes (e.g., Distance [m])
* ☐ Data is shown with good level of zoom to highlight the important parts of the captured trace. Beginning and end of the trace is trimmed.
* ☐ Data overlayed well (e.g., all three axes of acceleration measurements are plotted together on the same axes in different colors.)

### Caption

* ☐ Contains a figure number.
* ☐ Includes a succinct description of the contents of the figure.
* ☐ Is free of grammar and spelling issues.

### Supporting Text

* ☐ Refers to each figure
* ☐ Explains the signifiance and meaning of the figure.
* ☐ Correct sentence mechanics like cohesion and coherence between sentences and no run-ons
* ☐ Correct paragraph mechanics like topic sentences and placement at breaks between ideas
* ☐ Language is not stilted and jargon is kept to a reasonable minimum.

### Code

* ☐ Code used to process and plot the captured data is present
* ☐ Each script file has a descriptive filename (e.g., acceleration-data-procesor.m)
* ☐ Filename, author name, author email, and date included at the top of each script file.
* ☐ Each function contains a comment at the top describing its inputs and outputs
* ☐ Script file automatically exports and generated figures or processed data to files.