Machine learning application to study brain images to enhance performances

C. Riedel (Berkeley CA, August 2014)

The purpose of this document is to serve as an example of the proper style for lab reports. This document uses the AIP template in Microsoft Word. Remember to summarize your numerical results here in the abstract, with numerical error and units. The abstract should not exceed 100 words.

# Introduction

In your introduction, summarize the purpose of your experiment.

# Theory

Give the background of the experiment. Include all equations, defining all variables. Be sure to include references. You might refer to a book[[1]](#endnote-1), a web site[[2]](#endnote-2), or a paper[[3]](#endnote-3).

# Experiment

Here you give the details of what you did. If you deviated from what was expected, explain why. Include diagrams of the apparatus.

# Results

Give your results.

Table 1. An example table of fictitous data. V is the voltage measured across an imaginary resistor, I is the measured current.

|  |  |  |
| --- | --- | --- |
| Run # | V (mV) | I (A) |
| 1 | 25 | 0.10 |
| 2 | 59 | 0.22 |
| 3 | 100 | 0.40 |

Figure 1. Current versus voltage for an imaginary resistor. The error in the current measurements is assumed to be 0.05 A.

# Analysis/Discussion

Describe your calculations, and give the results. Give as many details as are practical (within 4 page limit). Typically one example calculation is acceptable. You should refer back to the equations from the Theory section, no need to repeat them again. Discuss errors and problems.

# Conclusions

Repeat your final results again, with error. Describe any problems. Give a thoughtful discussion of sources of error.[[4]](#endnote-4) Did you satisfy the purpose of the experiment, as stated in the Introduction?

1. D. Halliday, R. Resnick, J. Walker, *Fundamentals of Physics*, (Wiley, Jefferson City, 2011). [↑](#endnote-ref-1)
2. American Institute of Physics, “AIP Style Guide”, accessed 1/2012, http://www.aip.org/pubservs/style/4thed/toc.html. [↑](#endnote-ref-2)
3. R. Verre, K Fleischer, O. Ualikbe, I. V. Shvets, Appl. Phys Lett., **100**, 31102, (2012). [↑](#endnote-ref-3)
4. R. Forrest, Laboratory Report Checklist, 2012. [↑](#endnote-ref-4)