### Team project final report

created by all team members

Each team needs to prepare a report of their final project. The target audience for the report is the interdisciplinary undergraduate students.

The report needs to be written in English, **minimum 900 and maximum 1500 words long**.

(Title, Abstract, Figure and Table captions, Acknowledgements and References are not counted).

#### Title

Your title should clearly state what your research was about. The title should balance the number of general keywords and the number of specific keywords that allow the reader to understand what your project is about. **Maximum number of words in the title is 12**.

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#### Abstract

Begin with an abstract, ideally of about 200 words, but certainly no more than 300 words, aimed at readers of diverse backgrounds (for example, from social sciences, to math and medicine). The abstract starts with a 2-3 sentence basic introduction to the field; followed by a one-sentence statement of the main conclusions starting 'Here we show' or equivalent phrase; and finally, 2-3 sentences putting the main findings into general context so it is clear how the results described in the report have moved the knowledge forward (why would anyone care about what you did as a project and why your results matter). Words in the abstract do not count towards the total word number of the report.

#### Introduction

In the introduction section, make sure you explain well the background and introduce all necessary concepts for the reader to understand the rest of your report. Here you should cite all relevant work, by using a number that will correspond with the number of the publication in the reference list. For example (1) or example2.

#### Subheadings

Subheadings are a way to form the backbone of your report, so use them to tell the story about your project. Avoid generic subheadings like Materials and methods, Results and Discussion.

#### Main text

You should clearly explain the methods you have used so that anyone could reproduce your protocol. Your results should be clearly presented and any conclusion you have should be based on your results. Any discussion at the end of the text should be as succinct as possible, not repeating previous summary/introduction material, to briefly convey the general relevance of the work. If your results agree or disagree with previous research, you should comment on it and refer to papers that either support or go against your findings. Feel free to include the perspectives paragraph, to explain what would be the next steps to take based on your findings.

#### Visuals

Your report would typically have **3 or 4 small visuals** (figures or tables). All visuals need to be created by you, and fit to the target audience.

Try to represent all important aspects of your project in visuals, to complement the text. [10 Simple rules for figures](http://www.ploscompbiol.org/article/info%3Adoi%2F10.1371%2Fjournal.pcbi.1003833)

The visuals need to include: a visual protocol and at least one graph.

**All graphs need to be made using Python**. Each graph needs to contain clearly labeled axes and legends. If you are including any photos, each photo needs to have a scale bar. Each visual needs to be accompanied by a caption, which clearly describes the whole visual, without the need to consult the text of the report to understand it. The caption for figures needs to be placed under the figure, and the caption for tables needs to be placed above the table.

#### Supplementary material

Using Moodle, you need to submit **2 mandatory** and 3 optional supplementary material, which need to be clearly named and identified easily:

* one file with all raw data (.csv format) - if you have many tables, you can submit more than one .csv file
* one file with python code that will take your raw data as input and return the graphs you have in your report as output (.py format)
* one file with all code for arduino (if necessary)
* one file with more detailed description of methods (if necessary, .pdf format)
* one file with more results (if necessary, .pdf format)

#### Acknowledgements

You can add an acknowledgement section where you **briefly** thank people and sponsors.

#### References

Reference list should be made of minimum 10 and maximum 20 references, and most of them should be scientific papers. If you must include a website, you need to cite it properly, including the name of the website, the author, the URL and access date. You can choose any referencing format, as long as all references are cited in the same way.

**Important aspects of your research project report include:**

* respecting the word limit
* telling one story - your title, intro, methods, results, conclusions and perspectives should be linked and tell one story that makes sense
* effort in creating the visually appealing report -> see [Layout checklist](http://www.ttac.org/resources/pdfs/022912_Reporting_Well_ERLC-handout.pdf)
* scientific English
* citations of the sources you have used (bibliography), stating contributions (if you have used someone else's work as a basis) and comparing other's results to your results
* clear explanations of methodology, not too much and not too little, but just enough information to be able to reproduce your experiments
* scientific data representation, including clear labeling (axes, units, numbers, colors) and stand-alone description of each visual (figure or table)
* objectivity in forming conclusions based on your results
* ability to propose meaningful continuation of your project
* quality of Python code in the supplementary material