

# Template for Technical Reports

## DL-IC 2018 Project

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### Abstract

*The ABSTRACT should be self contained and explain what the paper is about. Usually abstracts are no longer than 300 words. You should state what are the main contributions of your work and tempt the reader to continue to read your paper. A good abstract briefly describes your problem, approach, and key results. This document is based on the CVPR submission template, and it has been adapted to submit a technical report of a project of the Deep Learning and Image Classification course.*

### 1. Introduction

The problem of efficient plant disease protection is closely related to the problems of sustainable agriculture and climate change. [1]

- A brief tutorial on how to write a paper/technical report.
- Specific good/bad examples of writing.
- An example of structure that is suggested to follow for a technical report and can be reorganized as you need.

Each researcher has its own style and preferences when it comes to write a paper, so feel free to modify the structure as it pleases you. This tutorial is especially directed to master students who might need more help to organize their reports.

### 2. Related work

In this section you should discuss published work that relates to your project. This is expected to be full of references, meaning that you have read the existing literature

and you know what you are working on very well. This is not just a list of works, but you are not supposed to cluster papers that use similar approaches and compare them each other using very short sentences. I strongly suggest to check [3, 4] blog posts for some good practices in writing a paper. A quote that I like very much is “Research is spending 6 hours reading 35 papers, so you can write one sentence containing 2 references” [2]. Keep it in mind while you are writing!

### 3. Proposed approach

This is the core of your paper, where you describe the details of the proposed method for solving the problem that you set up in the introduction. This is the most important section. It has to be clear why the chosen approach is the right thing to do with respect to the possible alternatives. The explanation of the method has to be readable and understandable and it should not raise obvious questions from the reader.

You can divide the section in paragraphs or subsections that can be useful for the presentation of your method. Usually at this point you may want to place equations, figures and tables to clarify what you are explaining.

### 4. Experiments

In this section you validate your method showing the experiments that you performed. The experiments will vary depending on the project, but you might compare with previously published methods, perform an ablation study to determine the impact of various components of your system, experiment with different hyperparameters or architectural choices, use visualization techniques to gain insight into how your model works, discuss common failure modes of your model, etc. You should include graphs, tables, or other figures to illustrate your experimental results. Divide

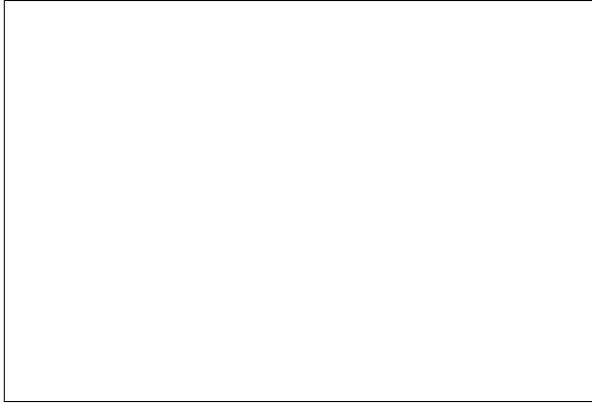


Figure 1. Example of caption. It is set in Roman so that mathematics (always set in Roman:  $B \sin A = A \sin B$ ) may be included without an ugly clash.

in subsections or paragraphs to help the reader navigate in your paper.

**Datasets.** Describe the data you are working with for your project. Usually you need to explain what type of data is it, how much data are you working with and if you applied any pre-processing, filtering, or other special treatment to use it. Remember that you have to cite each dataset you used in your project if it has been published from someone else. Instead, if you collected it by yourself you have to describe accurately how you gathered (and labeled) your data.

**Experiments setup.** Here you describe all the architectural choices of your model, the hyper-parameters of your model, *e.g.* optimizer, learning rate, momentum, batch size and if you cross-validate on them.

**Results and discussion.** Discuss your results and compare with other methods. You can also perform an *ablation study* on your model switching on and off some components to understand their contributions.

## 5. Conclusion

Summarize your key results. What have you learned from the project and suggest future extensions or new applications of your ideas.

## Acknowledgements

Here you can thank all the people that have been helpful during the project, but are not coauthors. It is important to add this section only in the final version that you send to the professors and **NOT in the review version** in order to not compromise the double blind review process. We thank Andrea Romanoni for the insightful comments during the

Method	Frobnability
Theirs	Frumpy
Yours	Frobbly
Ours	Makes one's heart Frob

Table 1. Results. Ours is better.

review of the manuscript, and all the old and new Gods who stand beside us when the deadline is dark and full of terrors.

## A. Supplementary Material

Supplementary material is not counted toward your 4-6 page limit and should be submitted as a separate zip file. Your supplementary material might include:

- Source code (if your project proposed an algorithm, or code that is relevant and important for your project.).
- Cool videos, interactive visualizations, demos, etc.

### Examples of things to NOT put in your supplementary material

- The entire PyTorch/TensorFlow Github source code.
- Any code that is larger than 10 MB.
- Model checkpoints.
- A computer virus.

## References

- [1] A. Alpher, J. P. N. Fotheringham-Smythe, and G. Gamow. Can a machine frobnicate? *Journal of Foo*, 14(1):234–778, 2004. 1
- [2] Bryan Gaensler. Tweet, 2018. <https://twitter.com/SciBry/status/989623027393531905>. 1
- [3] Jacob Steinhardt. Advice for Authors, 2018. <https://jsteinhardt.wordpress.com/2017/02/28/advice-for-authors/>. 1
- [4] Zachary C. Lipton. Heuristics for Scientific Writing (a Machine Learning Perspective), 2018. <http://approximatelycorrect.com/2018/01/29/heuristics-technical-scientific-writing-machine-learning-perspective/>. 1

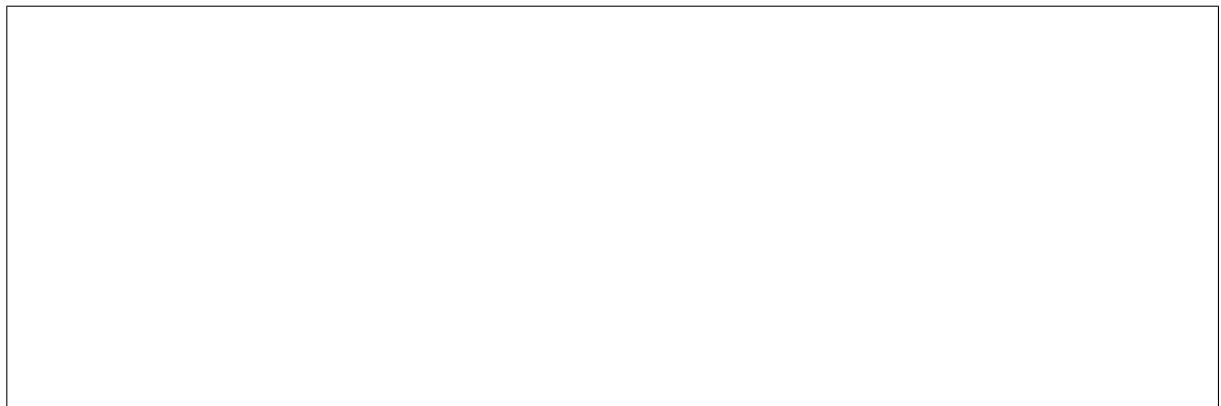


Figure 2. Example of a short caption, which should be centered.