Recommended resources for a Master project

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This document contains suggestions and links to resources that might be useful for performing and writing a Master project. You might also find them useful for pre-thesis, R&D or course projects.

1. Existing literature on a research topic

To search for scientific articles on a research topic the following search engines are recommended.

- https://scholar.google.com/
- https://www.sciencedirect.com/

This infographic provides suggestions on how to read scientific papers.

2. Writing style

2.1. Style

Similarly to a scientific article, a master project must include the following sections:

- Abstract (English and Danish)
- Introduction
- Methodology (Modelling or experimental methods)
- Results
- Conclusions
- Bibliography

This reference [**?**] nicely describes what is the purpose of each section and what should be included in each of them.

It is highly recommended to write the manuscript using Latex. You might want to use the online tool overleaf that allows writing shared tex documents and it is very intuitive.

You can find a template for the Master project in this folder, which is known to work in overleaf. The use of this particular template is not mandatory.

2.2. Language

Grammarly is a nice tool to check your text and avoid spelling errors.

For Danish speakers, this video summarizes the key rules on how to use commas in English.

3. Add a license to your Master thesis and code.

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4. Open Energy Modelling

The Open Energy Modelling Initiative gathers Master, PhD Students and other researchers dealing with energy modelling worldwide. It is a wonderful platform to learn what others are doing and what has been done in the past. To search on a particular topic you can: (a) register in the forum and search by topic, (b) subscribe to the distribution list where you can also search on previous topics or look in the wiki.

5. Python and PyPSA

A step-by-step description of how to install python and PyPSA can be found in the repository for the course project of Renewable Energy Systems. The repository includes also a tutorial to check that everything is working and start going.

5.1. Coding

It is highly recommended to write high-quality code with proper levels of documentation so that the analyses that you perform can be understood, used and extended by others. Most probably, you will benefit the most from it when you try to read you own code some weeks after writing it.

PEP-8 is a standard to write easy-to-read python code. Take a look at it and try to follow the rules in PEP-8.

5.2. Sharing code

To write code in a collaborative way, researchers use repositories where improvements can be progressively added. Two platforms that host public and private repositories are Github and Gitlab. In short, every user has its own local copy of the repository where he/she makes changes and push them to the remote repository shared by the collaborators. You can create your own repository to share your project with others and allow them to contribute to it. Similarly, you can contribute to projects by other researchers. Part 4 of this video presents a nice summary on how to use Github.