# Assignment 2

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- **Groups:** Working in groups of up to three people is encouraged, up to four people is allowed. More people are not allowed. Copying results from one group to another (or from elsewhere) is not allowed. Changing groups during the term is allowed.
- **Grading:** The grade for this class is a combination of the assignment submissions and an oral exam at the end of the term. For the assignments, we will consider the following aspects to assign a grade: (1) is your work well-motivated, (2) are the research question or hypothesis clearly stated, (3) are the slides understandable and easy to follow, (4) do the students critical reflect on their work, (5) did they contribute own creative ideas, (6) was the presentation understandable and well organized/understandable (including an oral presentation if presented), (7) the outcome has been analyzed properly.
- **Slides and additional document:** We acknowledge that it might be challenging to prepare a slide presentation that is well-suited for presentation and well-suited to be understood in isolation. The slide submission is mandatory. But if you prefer to additionally write a short document explaining additional aspects of your work, feel free to do so. This additional document can also be a longer version of the slides that you shorten for the actual mandatory submission.
- **Submission:** First make a group in Ilias, then submit the PDF file(s). Write all group members on the first pages of both PDFs. We might otherwise not be able to associate your submissions with the group members. If you are technically not able to make a group (it seems that happens on Ilias from time to time), do not submit a PDF multiple times by multiple people – only submit it once
- **Make it understandable:** Do the best you can such that we can understand what you mean. We do not only grade what you did – we grade what we see what you did.

The goal of this assignment is that you implement two different emotion classification methods and evaluate them with two existing corpora. Feel free to evaluate the model *in addition* on your own annotated corpus.

## Step 1: Task Specification and Corpus Choice

Think about what you want to do and discuss with your team members. Ideas are to compare different domains, or different methods; perhaps you want to see which existing resource works reasonably well on the corpus you annotate; perhaps you would like to manually design features or rules, or you want to explore the world of deep learning. Try to come up with a clear statement what the goal of your experiments is, and perhaps even with a research hypothesis or research question.

Based on that, decide on two corpora you want to work with. You can use the corpora we convert in `https://www.aclweb.org/anthology/C18-1179/` or other corpora. Limit yourself to those corpora that have discrete labels. We make the corpora from the paper available on Ilias. Make sure that you never ever put that file online. Part of these data is copyrighted. We can share it with you, but you cannot share it with other people.

## Step 2: Choice of Method

Based on your goal, decide on two out of these four method categories:

1. Dictionary-based

2. OCC (or other rules)

3. ML/Feature based

4. ML/Deep Learning based

The design of the goal of your experiment should motivate the choice of methods, therefore, this is likely a decision that comes together with Step 1.

## Step 3: Implement

Implement the methods of your choice. You are entirely free in library, language, or software architecture. If you have prior experience, feel free to make use of that.

## Step 4: Evaluate

Evaluate your systems. From the corpora you have chosen, use hold out data to test the system. Feel free to also do qualitative analysis in addition to generate insight what the models are doing. Try to understand where they fail and why, and what their strengths are. Compare the two methods. Optionally, you can also evaluate on the corpus you annotated. While I say "optionally", I mean that this is not mandatory; but this can still be your main interest.

## Step 5: Prepare slides and submission

Prepare roughly 6 slides for the submission of the exercise. Motivate your work, models and methods, mention and motivate the choice of resources and corpora, explain the experiments you made, report numbers, analyses, and insights; also critically assess your work and discuss.

Be prepared to present these slides in 5–10 minutes. If you want to report additional things, please prepare an additional document in which you share further information. The submission of the slides is mandatory, the submission of an additional document is optional.

Submit the documentation of your work via Ilias (in PDF format). Remember to let us know if you volunteer to present (in a dedicated survey on Ilias).

## Check

- Did you properly motivate and explain what you are doing? Why did you chose a particular approach? What would you like to learn from the experiments you are performing?

- Are the slides (+optional additional document) understandable?

- Did you critical reflect on what you were doing? Did you look into the results? What might have gone wrong? Are the results somehow questionable?

- Did you clearly point out own creative ideas, ideally motivated by observations during development? Were these properly explained?

- Do you share sufficient information that we see that the work has been carefully performed? Is that observable from the documentation?