

Module assessment

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MaLe / ADLS
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The assessment for the module **Maschinelles Lernen** comprises weekly Moodle tests, an individual project work and a final examination. The final grade is calculated according to the following overview:

Assessment	Weight
Experience grade	40%
Weekly Moodle tests	20%
Individual project work	20%
Final written module examination	60%

Weekly Moodle tests

After each lecture, test questions will be posted on Moodle, which you must submit by the **following Monday at 20h**. The experience grade (20% of the final grade) is calculated according to the following formula:

$$\text{Grade} = 5 \times \frac{\text{Total points achieved}}{\text{Total points possible}} + 1$$

You can solve the tasks individually or in teams, aids are permitted. The instructors will also be available to help you, even if we will not answer test questions directly. ☺

Final exam

The final exam (written, duration: 60 minutes) will take place during the examination period. Further information will be announced at the end of the semester.

The exam is a **closed book exam**. You can bring the following aids to the exam:

- Paper and writing utensils
- Two pages of summary (A4, both sides, handwritten or printed)
- A calculator
- A dictionary¹

Plain text answers can be provided in either English or German.

¹At least one copy will be provided by the tutor on site.

Project work

In an individual student project, you will practice to implement a machine learning pipeline and to train and validate a machine learning model. Your task is to solve a real-world data problem using methods you learned in this course.

The main document you will be required to turn in is a Jupyter notebook in which you motivate and describe the problem and data, train and validate the model, and discuss the relevant parameters and limitations. A template structure for the Jupyter notebook will be provided. The target audience are future students of the course.

Excellent or particularly instructive notebooks will be made available for reference in future editions of the course. You will, of course, be acknowledged for your contributions.

The **project timeline** is as follows (see also semester plan, SW: semester week):

- **SW 5:** Submit proposal for a project idea
- **SW 7:** Finalization of the problem statement, official start
- **SW 15:** Submission of the Jupyter notebook (via ZHAW SharePoint)

The following **deliverables** must be provided in a single ZIP folder:

- A functional Jupyter notebook with the tutorial (main document)
- A PDF version of the notebook with all its outputs (for instructions, see below)
- Data and other resources used (or instructions on how to obtain them)
- **Important:** The size of the submission (including data) must not exceed **50MB!**

Students must be able to answer basic questions about their project, implementation (programming) and results. The use of generative AI tools is permitted (and encouraged) but must be declared in accordance with [University guidelines](#).

Peer reviewing: In addition to the project, you must read (at least) three other projects and give constructive feedback to your peers. The exact format will be announced at the end of the semester.

Grading will be based on a grading scheme (to be announced).

Jupyter notebook → PDF: There are several ways to convert a Jupyter notebook into a PDF. The following method has proven to work well.

- Run and save your entire Jupyter notebook
- Open a terminal and run the following command

```
$ jupyter nbconvert --to html "path/to/your/notebook.ipynb"
```

- Open the document in a web browser (Opera works best!)
- Save as PDF