**Deep Learning and Generative Models**

**Project assignment #29**

**Project objective**:

* Semantic segmentation of buildings with the MapAI dataset.

**Dataset**:

MapAI dataset: Precision in Building Segmentation Dataset

<https://paperswithcode.com/dataset/sander-jyhne>

<https://huggingface.co/datasets/sjyhne/mapai_dataset/tree/main>

<https://www.nora.ai/competition/mapai-precision-in-building-segmentation/index.html>

**Network model**:

* Architecture like U-Net

**Detailed information**:

* Resolve the segmentation task with the RGB images.
* Then try to add also the lidar information (Laser Data).
* Then, try to segment with the lidar information only.
* Compare the performance in the three cases.
* Make the ablation studies you prefer.

**Additional notes**:

If the test dataset is still not available, split the training dataset in 80% training and 20% test.

For the evaluation, look inside the repository to find the code of the evaluation functions:

https://github.com/Sjyhne/MapAI-Competition/tree/master/competition\_toolkit/competition\_toolkit