

**The project implementation should include the following steps from the Machine Learning pipeline (They should be clearly distinguishable by reading your code):**

1. Data Acquisition [Database, Datastream, Api,...]
2. Data preprocessing [Data cleaning, Data vectorization, Data standardization,...]
3. Apply at least one of the machine learning models presented in the course to your dataset
4. Evaluate your results using Model selection techniques [Choice of model, Hyperparameter Optimization,...]
5. Present/Visualize conclusions and results of your model

**Notes on Frameworks/Programming Language:**

- Preferably use Python
- Preferably use SkLearn or PyTorch

**Please hand in:**

- A folder, including your code and link to the dataset, or the method-call needed to load the dataset (PLEASE DON'T UPLOAD DATASETS). The exact upload destination in TUBS-cloud will be announced soon. Your code is allowed to be delivered in Jupyter-Notebook, Python files etc.
- Presentation slides

**Notes on grading:**

- 50% final presentation(including: dataset used, methods/libraries used, results)
- 25% documentation of code
- 25% code quality

**Bonus:**

- 10% innovative spirit(try to solve an “exciting” problem, e.g. no sklearn, pytorch-internal dataset)
- But be careful with picking too complex problems

**Note:**

- If you decide to use different frameworks/programming languages than the ones presented in the course, make sure to include a code-walkthrough in your final presentation
- If you have ideas for a project that you want to work on, let us know in the practical session(you can get inspiration on datasets/problems here: [kaggle.com](https://www.kaggle.com) )
- We will propose 2 projects on January 21st that you can choose as an alternative(their difficulty will be adjusted to the time left for working on them)
- If possible, work in groups between 2-3 people(exceptions are acceptable but need to be communicated with us). Use the Zoom session(practical session) or the TUBS-cloud chat to propose your ideas to others and find group members.

