Student project 2021-22

Machine learning on Lack detection (ML LaDECO)

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1 USER MANUAL

The following steps should be performed to run the program and test cases. All the files are written in python.

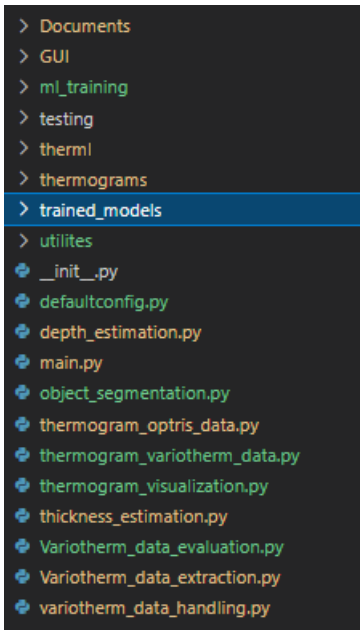

Figure 1: List of all python modules

1. GUI - Contains files for GUI operation

2. ml training - Contains python scripts for training model, generating masks and building datasets.

3. testing - contains test cases for LaDECO project

4. therml- contains machine learning model scripts

5. trained models - contains the trained model weights and parameters

1.1 GUI

GUI for LaDECO is built on tkinter.

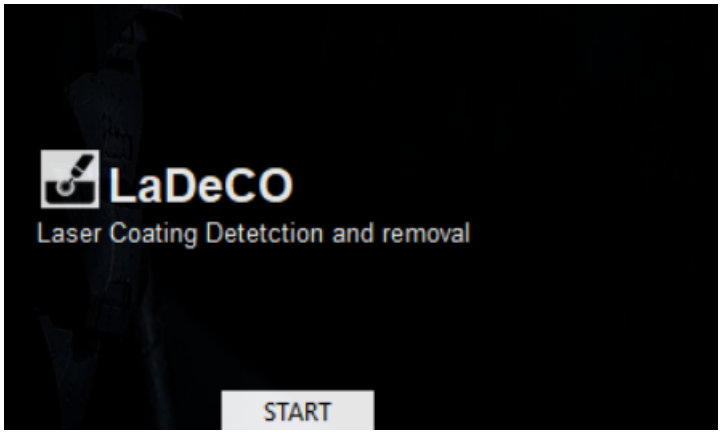

Figure 2: GUI start page with logo

Press start to enter the program

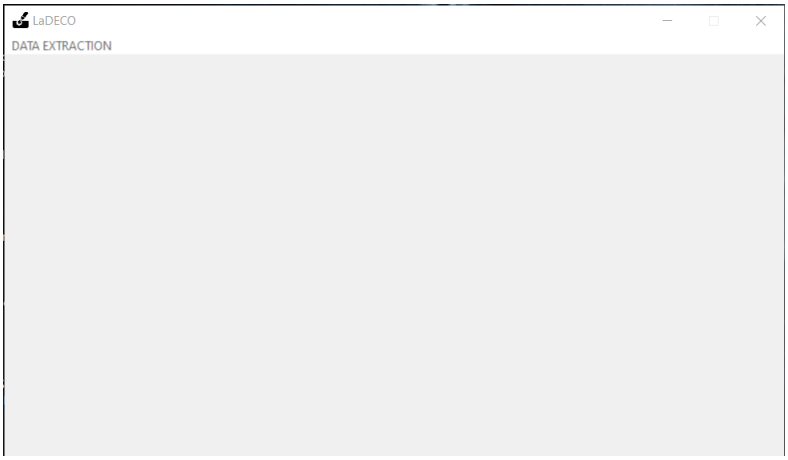

Figure 3: initial page of LaDECO with menu bar at top

After selecting data extraction option, the extraction window pops-up

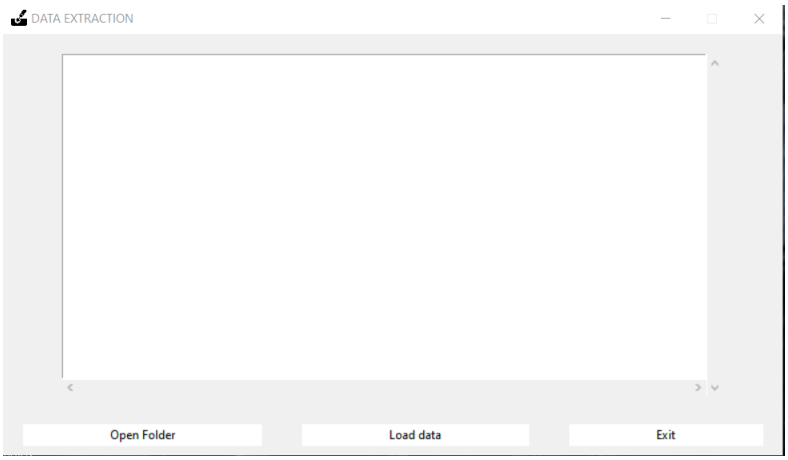

Figure 4: Data extraction window

The data extraction window consist of three options

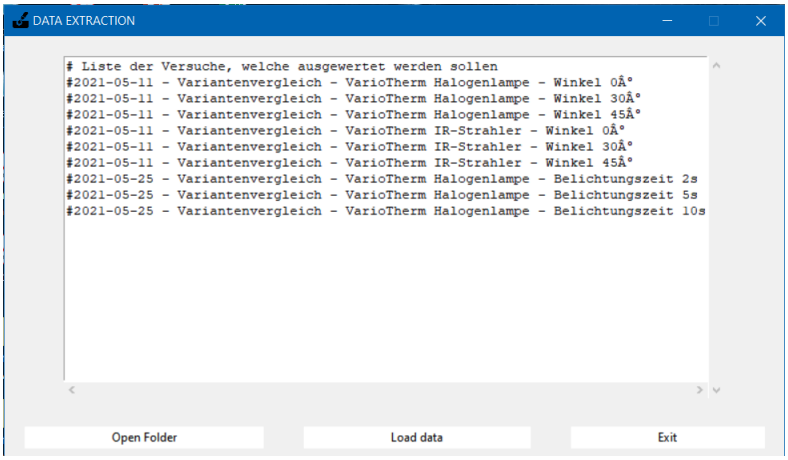

Figure 5: open folder option

The list of all experiment in that folder are printed. We have the option of changing the list here.

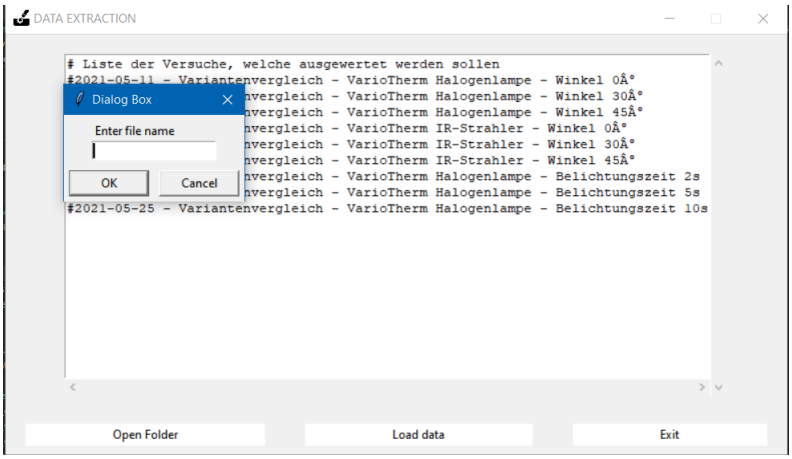

Figure 6: load data option

The name of the output file needs to be given before loading can start.

1.2 Procedure to run the program

All python files have to be placed in same folder and working directory has to be same to run the python program. Python version 3.8.2 can be used to run this

python code.

To run the program, we should be at the root directory */LADECO*

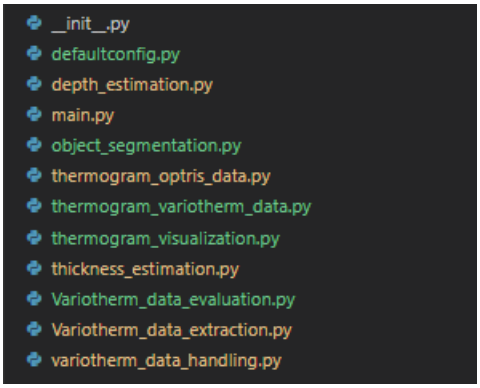

Figure 7: List of all sample example

How to use the LaDECO project module are provided with the above examples. You can find more information in the associated files.