

# The Machine Learning Reproducibility Checklist (v2.0, Apr.7 2020)

## **Secs. “Defining ELENE” & “Learning with ELENE”**

For all **models** and **algorithms** presented, check if you include:

- ☒ A clear description of the mathematical setting, algorithm, and/or model.
- ☒ A clear explanation of any assumptions.
- ☒ An analysis of the complexity (time, space, sample size) of any algorithm.

For any **theoretical claim**, check if you include: **Sec. “Expressive Power”**

- ☒ A clear statement of the claim.
- ☒ A complete proof of the claim.

For all **datasets** used, check if you include: **Sec. “Experimental Results”**

- ☒ The relevant statistics, such as number of examples. **Referenced**
- ☒ The details of train / validation / test splits. **Defined in code**
- ☒ An explanation of any data that were excluded, and all pre-processing step. **Referenced**
- ☒ A link to a downloadable version of the dataset or simulation environment. **Standard PyG**
- ☒ For new data collected, a complete description of the data collection process, such as instructions to annotators and methods for quality control. **Not applicable**

For all shared **code** related to this work, check if you include:

- ☒ Specification of dependencies. **Defined in setup.sh**
- ☒ Training code. **src/train\_helper.py and train/\*.py**
- ☒ Evaluation code. **train/\*.py — incl. metrics for each model**
- ☒ (Pre-)trained model(s). **Not applicable**
- ☒ README file includes table of results accompanied by precise command to run to produce those results. **See README.md and REPRODUCIBILITY.md**

For all reported **experimental results**, check if you include: **Sec. “Experimental Results”**

- ☒ The range of hyper-parameters considered, method to select the best hyper-parameter configuration, and specification of all hyper-parameters used to generate results.
- ☒ The exact number of training and evaluation runs.
- ☒ A clear definition of the specific measure or statistics used to report results.
- ☒ A description of results with central tendency (e.g. mean) & variation (e.g. error bars).
- ☒ The average runtime for each result, or estimated energy cost. **We report mem. as a proxy in multi-user env.**
- ☒ A description of the computing infrastructure used.