Requirements

For the implementations of proposed methods

- Python 3.7
- numpy 1.21.6
- scikit-learn 1.0.2
- scipy 1.7.3
- matplotlib 3.5.3 (for plotting)
- torch 1.31.1
- joblib 1.1.0
- h5py 3.7.0 (for handling h5-files)
- Jupyter notebook (for Python and Julia programs)

For data acquisition & analysis

A Julia software named **DynamicalSystems.jl** is applied

- Julia 1.9.3
- CairoMakie 0.10.12
- DynamicalSystems 3.2.3
- DifferentialEquations 7.11.0
- HDF5 0.16.16
- JLD 0.13.3
- LinearAlgebra
- Statistics 1.9.0

Additionally: the implementations of baseline AE-FNN

It utilizes the Tensorflow package, and other tutorials can be found in the public library **fnn**

- tensorflow 2.2.0
- numpy
- scipy
- scikit-learn

Note: The numerical results are stored in h5 (hdf5) file type. Julia is indexed by column, as in the Fortran language, which is different from Python (indexed by row)