1. Software Pre-requites:

In order to run the project code, the following software need to be installed:

1. Python 2.7
2. Pandas, Numpy, Matlibplot packages
3. Tensorfow Package
4. Theano Package
5. Keras Package
6. DEAP Package
7. Jupyter Notebook
8. To Run the Static ANN

For CPU: run from command line python MLP\_Static\_CPU.py

( note you need to change manually in the code the dataset number , and filters)

1. To Run the Dynamic ANN

For CPU : run from command line python MLP\_Dynamic\_CPU.py

( note you need to change manually in the code the dataset number , and filters)

1. To Run Static ANN with GA

run from command line:

python GA\_with\_Static\_MPL-XX\_ver2.py < dataset number> < unit filter default > < population size> < generation number>

1. To Run Dynamic ANN with GA

python GA\_with\_Dynamic\_MPL-ver4xx.py < dataset number> < unit filter default > < population size> < generation number>

1. To Run LSTM

* For CPU : run from command line python LTSM.py

( note you need to change manually in the code the dataset number , and filters)

For GPU :

* run from command line with the parameters:  
  python CuDNNLSTM\_gpu.py <dataset number> < unit filter> <step size>

1. Data Analysis notebooks

The following data analysis notebooks can be run using the Jupyter notebook:

