Configuration for machine learning algorithms

1. Mapper configuration file
2. File format

**1. data base access**

0: video/image files, store only the file name

1: text file

2: mongodb

3: sql

4: mysql

5: oracle

6: stream data

**2.number of features**

**3.feature data type**

0: int

1: float

2: string

*data base specific settings*

*text file:*

**4.file location**

*mongodb:*

**4.db\_name**

**5.db\_ip**

**6.db\_port**

**7.collection\_name**

**8.key\_name**

**9.use\_username**

**10.username**

**11.password**

*sql:*

**4.db\_name**

**5.table\_name**

*mysql:*

**4.db\_name**

**5.db\_ip**

**6.table\_name**

**7.username**

**8.password**

*oracle:*

**4.db\_name**

**5.db\_ip**

**6.db\_port**

**7.table\_name**

**8.username**

**9.password**

stream:

**4.web\_link**

**5.key\_name**

**6.data\_num**

1. Example configuration file

map\_config.txt

1. text file

5 number of features

1 1 1 0 0 data type for the 5 features: float, float, float, int, int

../data/attack/feature.txt file location

1. Model configuration file
2. File format

**1. model selection**

0: svm

1: random forest

2: pca

3: lstm

4: logistic regression

5: adaboost

6: neural network

7: k nearest neighbors

8: perceptron

9: ridge

**2. model parameters**

*svm*

eta epochs

*random forest*

n\_trees max\_depth min\_size sample\_size

*pca*

n\_components

*lstm*

history\_length loss optimizer epochs batch\_size

*logistic regression*

C

*adaboost*

max\_depth algorithm n\_estimators

*neural network*

loss optimizer epochs batch\_size

*k nearest neighbors*

weights

*perceptron*

n\_iter

*ridge*

tol solver

1. Example configuration file

model\_config.txt

0 svm

0.001 10000 eta epochs

1 random forest

5 10 1 1 n\_trees max\_depth min\_size sample\_size

2 pca

1 n\_components

3 lstm

4 mean\_squared\_error adam 100 1 history\_length loss optimizer epochs batch\_size

4 logistic regression

1e5 C

5 adaboost

1 SAMME 200 max\_depth algorithm n\_estimators

6 neural network

mean\_squared\_error adam 100 1 loss optimizer epochs batch\_size

7 k nearest neighbors

distance weights

8 perception

200 n\_iter

9 ridge

1e-2 lsqr tol solver