

Instruction Guide

Matlab is essential for the MD software.

How to install

Download and unzip the MD software to your root directory.

The folder 'Code' should be on the root of the C drive. Or you will have to change the path on the Script.

How to startup

(step 1) Prepare your data

The training data should be placed in the "Training.dat" file.

The file contains four tabs delimited column. The data are the event depth, P-wave corner frequency, S-wave corner frequency and their ratio. You could edit the file after download or create your own.

depth	FcPHz	FcSHz	FcPFcS
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08.46	10.28	08.95	1.15
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The test data should be placed in the file "test-data.dat"

This file contains the corner frequencies and their ratio of the unknown events that are to be classified as either earthquakes or explosions.

FcPHz	FcSHz	FcPFcS
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10.28	8.95	1.15
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5.45	4.12	1.32
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(step 2) Change the Matlab working directory to the Code directory

(step 3) Run the script IU.m this will initialize the SOM clusters

(step 4) Run The MD.m script which will produce the discrimination results in the text file "CM.txt"

The results are binary coded where 1 is for earthquakes and 0 for explosions.