

# MODULES I (Data/Signals)

## Signal

### Signal Class

No properties

Methods:

- `__init__`
- `plot_signal`
- `get_signal_info`
- `transform_spherical`
- `__str__`
- `__repr__`

`plot_class_distribution`

`show_signals_info`

`load`

`load_all`

`load_all_signals`

`signed_amplitude`

## ReadAndEncode

`readAdjust`

`readPatientFiles`

`encodeDiagnosis`

`kodiraj`

`classDistribution`

`cropAndReshape`

`getUniquePatients`

`readAllDataAndAutoSplit`

`readAllDataAndSplitFromTxt`

## Diagnosis

`encode_diagnosis`

`decode_diagnosis`

`show_class_distribution`

`get_diagnosis_names`

`get_diagnosis_names_plot`

`get_diagnosis_number`

## Sinal2Test

`convert_signals1`

`convert_signals`

`convert_signal`

`get_signals`

`get_taps`

`adjust`

`crop`

`reshape`

## Parameters

### SignalType class

No methods

### TapType class

No methods

Loose code

# MODULES II (Taps)

## MakeFileWithManuallyModifiedTapSplits

addPoints  
removePoints  
modifySignalSplits  
findMeasurementByID  
writeAllSignalSplitsToFile

Loose code running the functions above

## Tap

load\_all\_taps  
get\_taps  
stretch\_time\_taps  
crop\_time\_taps  
avg\_val\_tap  
diff\_taps  
stretch\_val\_taps  
stretch\_val\_each\_taps  
crop\_val\_taps  
tap\_max\_len  
tap\_max\_abs\_val  
taps\_integral  
taps\_no\_drift\_integral

## PlayingWithSplitTaps

longestTapInSequence  
longestTapInAllData

Loose code running the above functions

## ManuallyCheckTapSplits

threaded

### dataPlotter class

Methods:

- \_\_init\_\_
- fig\_close\_handler
- fig\_keypress\_handler
- connect\_fig\_close\_event
- connect\_keypress\_event
- beginPlotting
- plotData
- daw
- getUserInput

Loose code running the above functions

## Extractor

get\_values  
get\_values\_scaled  
get\_spherical  
get\_spherical\_scaled  
get\_amplitude  
get\_signed\_amplitude  
get\_diff\_signed\_amplitude  
get\_square\_amplitude  
get\_amplitude\_integral  
get\_amplitude\_no\_drift\_integrall  
get\_amplitude\_scaled  
get\_spectrogram  
get\_all  
get\_taps  
get\_signal\_taps  
get\_taps\_normalized\_len  
get\_signal\_taps\_normalized\_len  
get\_taps\_normalized\_max\_len  
get\_signal\_taps\_normalized\_max\_len  
get\_taps\_max\_len\_normalized  
get\_signal\_taps\_max\_len\_normalized  
get\_taps\_double\_stretch  
get\_signal\_taps\_double\_stretch  
get\_taps\_no\_drift\_integral  
get\_signal\_no\_drift\_integral  
concatenate\_taps  
calc\_integral  
calc\_linear\_drift  
calc\_no\_drift\_integral  
concatenate\_lists

## MODULES III (ML)

### RandomMLModelTopology

#### RandomMLModelTopology class

- \_\_init\_\_
- get\_name

### MultiHeadedModelTopology

#### MultiHeadedModelTopology class

- \_\_init\_\_
- get\_x

### CNNMLModelTopology

#### CNNMLModelTopology class

- \_\_init\_\_

### CNNAutoencoderMLModelTopology

#### CNNAutoencoderMLModelTopology class

- \_\_init\_\_
- init\_model
- train
- evaluate

### MLModelTopology

#### MLModelTopology class

\* under construction

Methods:

- \_\_init\_\_
- init\_model
- train
- evaluate
- get\_name
- show\_model\_info
- save
- calc\_confusion\_matrix
- predict\_signal
- get\_x
- \_\_str\_\_
- \_\_repr\_\_

show\_models\_info

### ModelTopologyGenerator

create\_model

### SequentialMLModelTopology

#### SequentialMLModelTopology class

methods:

- \_\_init\_\_
- \_\_str\_\_

### LSTMModelTopology

#### LSTMModelTopology class

Methods:

- \_\_init\_\_

### ConfigurableMLModelTopology

#### ConfigurableMLModelTopology class

Methods:

- \_\_init\_\_
- init\_model
- train
- evaluate
- get\_configuration

## MODULES IV (Tests)

### Evaluator

multiple\_evaluations  
single\_evaluation  
combine\_model\_results  
show\_evaluation\_results\_info

### TestGenerator

create\_tests  
create\_tests\_info  
create\_test  
create\_simple\_test  
extract\_test\_and\_concatenate  
extract\_test  
create\_mixed\_test  
split\_one\_diagnosis  
convert\_test  
load\_test

### Test

#### Test class

##### Methods:

- \_\_init\_\_
- \_\_str\_\_
- \_\_repr\_\_

show\_tests\_info  
show\_test\_info  
show\_class\_distribution

### Results

#### Result class

##### Methods:

- \_\_init\_\_
- \_\_str\_\_
- \_\_repr\_\_
- save

show\_confuse\_matrix  
plot\_confuse\_matrix  
calc\_confuse\_matrix\_percent  
calc\_metrics  
clean  
examine\_history  
show\_history  
show\_max\_accuracy

## MODULES V (redundant)

### measurement

#### measurement class

##### \* overlaps with Signal class

- \_\_init\_\_
- packAndCrop
- sumUp
- plotSignals
- transformSpheric
- mostProminentAxis
- findTapSplits
- splitTaps
- isRightHand

### MachineLearningModel

#### \* overlaps with topology modules

CNNmodel  
CNNSequentialModel  
LSTMModel  
CNNRandomModel  
MultiHeadedModel  
MultiHeadedModel1  
CNNModelAutoencoder  
CNNModelFromAutoencoder  
fit\_model  
fit\_model\_no\_validation  
fit\_modelA  
def\_callbacks1  
def\_callbacks2  
def\_callbacks3  
get\_optimizer\_adam  
get\_optimizer\_sgd  
compile\_model

### Tapping\_ver2.0

redundant script

### TappingRedone

redundant script

### TappingRedoneTransforms

redundant script

### crtanjeParkina

some loose plotting