NWB Format Interface

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Required Actions:

1. Statistics and Machine Learning Toolbox.
2. Before using the class make sure to add to path @NWBRecording.
3. Please install and follow the instructions of the MatNWB package installation from its website to get the most recent version.
    - The address is : https://github.com/NeurodataWithoutBorders/matnwb
    - The installation should be in the following path: NET\timeSeriesViewer\dataRecordingObjects\helperFunctions

Properties:

- pathToAllRecordings.
- pathToProcessors.
- channelNamesArr- To each recording and processor that is in the recording.
- channelNumbersArr- To each recording and processor that is in the recording.
- recordingDuration_msArr- Each recording and processor that is in the recording.
- recordings- The info path to all recordings available.
- metadataInRec- Number of raw data in recording.
- recordingsInFile- All of the recording that are in one file.
- defaultProcessorNum- Gui supports the first recording and processor only.
- defaultRecordingNum- Gui supports the first recording and processor only.
- nwbReadFile- The file is only read, no data is loaded.
- samplingFrequencyArr- Sampling freq to each recording and processor that is in the recroding.
- triggerTimestamps- To each recording and processor that is in the recording, just the data info , not loaded.
- allTriggerTimestampsLoaded- To each recording and processor that is in the recording.
- fullFilename .
- timestamps-To each recording and processor that is in the recording, just the data info , not loaded
- allTimestampsLoadedto- Each recording and processor that is in the recording.
- processorsNames.
- recordingNames.
- Metadata- The actual data.
- sample_ms- To each recording and processor that is in the recording.

Methods:

function obj = NWBRecording(recordingFile)-
This function is the class constructor. It reads the NWB file and calls getFilesAndExtract to start analyzing. It also makes sure it has all the arguments needed.

function obj =getFilesAndExtract(obj)-
This function takes the file path and read the information. Afterwards it send it to extraction function to analyze.

function [V_uV ,t_ms]=getData(obj, channels, startTime_ms, window_ms)-
GUI function takes the first recording and the first processor in that recoding and displays its data.

function [T_ms]=getTrigger(obj, startTime_ms,window_ms)-
GUI interface applies only for one recording. The time is relative to the start time of the recording start time.

function [startIndex,endIndex]=
GetElementIndex(obj,startTime_ms,endTime_ms,timestampsLoaded)-
timestampsLoaded can be all timestamps / trigger timestamps etc. gives the relevant indices of the array.

function obj= extractMetaData(obj, fullFileName)-
Extracting the data from the file. goes over each recording and each processor and assign the values to the obj.

function obj=
FillInCurrentRecordingData(obj,recording,recordingName,processorNum,fullFileName)-
This function is called by extractMetaData in order to fill the values for all variables needed.

function obj= GetDefaultDataForGui(obj)-
This function is called by extractMetaData in order to fill the values for all variables needed specifically for the GUI (only the first recording and the first processor).