Start peak extractor

Function that loads in data files

Parameters:

- file path (path to the data file)
- timestamp_header: the column header for timestamps

Returns: - timestamps: Numpy array of timestamps

- Data: Numpy array of all data columns

Function that extracts and organizes data from multiple files

Parameters:

- file_path: Path to the data file.
- timestamp_header: The column header for timestamps.
- column_name: The column header for the data.

column (default: None).

- data_column: Pandas Series of data associated with the specified

Returns:

- data_array: Structured array containing organized data.

Function that detects tap times using vector math and saves the results in a file named * taps.csv

Parameters:

- File_dir: base directory of parsed data files
- File_base_names: Array of file bases of the data files
- Timestamp_id: Timestamp identifier to use for timestamps of taps
- Time_window: Window (in secs) from the beginning of the file to look for taps
- Height: Height of the threshold detecting the peaks

Function that plots taps for a specific type of file

Parameters:

- Data_array: structured array containing organized data for a specific type of file
- Height: Height of the the threshold for detecting peaks

Legend:

Presently Working

Needs Engineering

Notes:

Separate function functionality check:

Load Data function runs successfully: example batch file is "tapdetector_loaddata_example.py"

Extract Data function

Extract Data function runs successfully: example batch file is

"tapdetector_extractdata_example.py"

What is left to do: the detect function and plotting the peaks is already implemented code in the original tapdetector.py script. Just need it to work with the data array that is ouputted from the data array in extract_data function