Package 'actilifecounts'

October 12, 2022

Type Package

Title Generate Activity Counts from Raw Accelerometer Data

Version 1.1.0

Author Jairo Hidalgo Migueles

Maintainer Jairo Hidalgo Migueles <jairo.hidalgo.migueles@gmail.com>

Description A tool to obtain activity counts, originally a translation of the 'python' package 'agcounts' <https://github.com/actigraph/agcounts>. This tool allows the processing of data from any accelerometer brand, with a more flexible approach to handle different sampling frequencies.

Encoding UTF-8

Depends R (>= 2.10)

Imports gsignal, pracma

RoxygenNote 7.2.1

License LGPL (>= 3)

Suggests covr, testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

Repository CRAN

Date/Publication 2022-09-26 08:30:02 UTC

R topics documented:

`bpf_filter` *bpf_filter*

Description

Bandpass filter for actigraph downsampled data

Usage

```
bpf_filter(downsample_data = c(), verbose = FALSE)
```

Arguments

`downsample_data`	Matrix containing downsampled data
`verbose`	Print diagnostic messages

Value

The filtered data

Author(s)

Jairo Hidalgo Migueles

References

Ali Neishabouri et al. DOI: https://doi.org/10.21203/rs.3.rs-1370418/v1

`get_counts` *get_counts*

Description

get_counts

Usage

```
get_counts(raw, sf, epoch, lfe_select = FALSE, verbose = FALSE)
```

Arguments

`raw`	Matrix containing raw data (3 columns, no timestamp should be included)
`sf`	Sample frequency of raw data (Hz)
`epoch`	Epoch length to aggregate activity counts
`lfe_select`	False for regular trimming, True for allow more noise
`verbose`	Print diagnostic messages

Value

Matrix containing the count values per epoch in each axis and vector magnitude

Author(s)

Jairo Hidalgo Migueles

References

Ali Neishabouri et al. DOI: https://doi.org/10.21203/rs.3.rs-1370418/v1

`resample_10hz` *resample_10hz*

Description

Get data back to 10 Hz for accumulation

Usage

```
resample_10hz(trim_data = c(), verbose = FALSE)
```

Arguments

`trim_data`	Matrix containing the trimmed/thresholded data
`verbose`	Print diagnostic messages

Value

Resampled data

Author(s)

Jairo Hidalgo Migueles

References

Ali Neishabouri et al. DOI: https://doi.org/10.21203/rs.3.rs-1370418/v1

resample_30hz *resample_30hz*

Description

Resample the raw data.

Usage

```
resample_30hz(raw = c(), sf = 30, verbose = FALSE)
```

Arguments

raw	Matrix containing raw data
sf	Sample frequency of raw data (Hz)
verbose	Print diagnostic messages

Value

resampled_data

Author(s)

Jairo Hidalgo Migueles

References

Ali Neishabouri et al. DOI: https://doi.org/10.21203/rs.3.rs-1370418/v1

sum_counts *sum_counts*

Description

Generate counts per epoch.

Usage

```
sum_counts(downsample_10hz, epoch = 60, verbose = FALSE)
```

Arguments

downsample_10hz	Matrix containing downsampled to 10hz data
epoch	Used to compute how many raw samples are used for computing an epoch
verbose	Used to compute how many raw samples are used for computing an epoch

Value

Matrix with counts per epoch in the 3 axes

Author(s)

Jairo Hidalgo Migueles

References

Ali Neishabouri et al. DOI: https://doi.org/10.21203/rs.3.rs-1370418/v1

`trim_data` *trim_data*

Description

trim_data

Usage

```
trim_data(bpf_data = c(), lfe_select = FALSE, verbose = FALSE)
```

Arguments

`bpf_data`	Matrix containing filtered data
`lfe_select`	False for regular trimming, True for allow more noise
`verbose`	Print diagnostic messages

Value

The trimmed/thresholded data

Author(s)

Jairo Hidalgo Migueles

References

Ali Neishabouri et al. DOI: https://doi.org/10.21203/rs.3.rs-1370418/v1

Index