Package 'gps.track'

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Type Package

Title GPS Track Point Information Extractor

Version 1.0.0

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Description Focused on extracting important data from track points such as speed, distance, elevation difference and azimuth.(PLAZA, J. et al., 2022) <doi:10.1016/j.applanim.2022.105643>.

License GPL-3

Encoding UTF-8

RoxygenNote 7.2.3

Imports nngeo, raster, sp, sf

NeedsCompilation no

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R topics documented:

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path_gps *GPS track point information extraction.*

Description

Allows extracting and generating new information from track points data collected with GPS.

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Usage

```
path_gps(
  filename = NULL,
  layer = "track_points",
  time_zone = "Etc/GMT-0",
  zone_correction = "Etc/GMT+3",
  arq_type = c("shp", "gpx")
)
```

Arguments

`filename`	string designating the file .gpx or .shp path in geographic coordinates
`layer`	string that designates the layer with the trackpoint data when arq_type = "gpx", in case arq_type = "shp" layer is ignored
`time_zone`	string designating the gps default time zone
`zone_correction`	
	string designating the time zone for correction
`arq_type`	string that designates whether the file is type "shp" or "gpx", "shp" default

Value

returns a data frame with information about time, coordinates, elevation, distance, speed, elevation difference and azimuth (always calculated in relation to the later point)

Examples

```
path.file.ex <- base::system.file("extdata", "trajeto_teste.shp", package = "gps.track")
df.gps <-
path_gps(
  filename = path.file.ex,
  time_zone = "Etc/GMT-0",
  zone_correction = "Etc/GMT+3",
  arq_type = "shp"
)
```

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point_to_line	*Data.frame with coordinates of points to sf with coordinates of line*

Description

Allows converting data.frame with coordinates of points into sf with coordinates of line.

Usage

```
point_to_line(
  data = NULL,
  col_long = "long",
  col_lat = "lat",
  crs_proj = "+proj=longlat +datum=WGS84"
)
```

Arguments

data	Data frame containing coordinates of points to convert to lines
col_long	String containing the name of the column containing the longitude
col_lat	String containing the name of the column containing the latitude
crs_proj	String containing the proj4string

Value

returns a sf object with coordinates of line.

Examples

```
path.file.ex <- base::system.file("extdata", "df_gps.csv", package = "gps.track")
df.gps <- read.table(path.file.ex,h=TRUE)


df.gps.line <-
point_to_line(
  data = df.gps,
  col_long = "long",
  col_lat = "lat",
  crs_proj = "+proj=longlat +datum=WGS84"
)
```

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