Package 'cepiweek'

February 19, 2026

Title Continuous Epidemiological Week Indexing for Time-Series Analysis

Version 0.1.2

Description Provides a simple algorithm to generate a continuous epidemiological week index from date variables in a dataframe. Weeks are computed as sequential 7-day intervals starting from the earliest observed date. They do not reset at calendar year boundaries and are not ISO 8601 nor MMWR calendar weeks. The approach is intended for epidemiological modeling and time-series analysis where temporal continuity is required. The generated weeks are sequential and do not reset at calendar year boundaries.

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Encoding UTF-8

Imports lubridate

RoxygenNote 7.3.3

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

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`cepiweek` *Generate Continuous Epidemiological Week Index for a Date Column*

Description

This function adds a continuous epidemiological week index to a data frame by assigning each date to a sequential week number starting from a reference date.

Usage

```
cepiweek(data, col_date, start = NULL, format = "dmy")
```

Arguments

`data`	A data frame containing the date column.
`col_date`	Name of the date column (string).
`start`	Optional start date for counting weeks (Date or string). Defaults to the minimum date in the column `col_date`.
`format`	Optional date format flag. Use `"mdy"` if all dates are in month-day-year format (common in US). Defaults to `"dmy"`/`"ymd"` which handles day-month-year or year-month-day formats.

Details

The generated weeks are continuous and **do not reset at calendar year boundaries**. They are **not ISO 8601 or MMWR weeks**. This function is intended for epidemiological modeling, time-series analysis, and nowcasting applications.

You can specify a `start` date for counting weeks; if none is provided, the minimum date in the column is used. The function also allows specifying the `format` of the dates to handle different conventions (day-month-year vs month-day-year).

- The function automatically replaces `/` with `-` for consistency.
- If any dates cannot be converted, the function stops with an error.
- A warning is issued if the `start` date is after the earliest date in the column.
- Continuous weeks are aligned to Mondays.

Value

A data frame with an added `cepiweek` column containing continuous week indices.

See Also

GitHub page of the package.

Examples

```
# Standard dmy/ymd dates
k <- data.frame(
  num = c(1, 2, 3),
  date = c("15-01-2024", "12/02/2025", "2026-08-01")
)
cepiweek(k, col_date = "date")

# American format mm-dd-yyyy
k2 <- data.frame(
  num = c(1, 2, 3),
  date = c("01/15/2024", "02-12-2025", "08/01/2026")
)
cepiweek(k2, col_date = "date", format = "mdy")
```

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