Package 'RCaucTile'

March 2, 2026

Type Package

Title Tile Grid Maps for East Caucasian Languages

Version 1.0.4

Description Generates tile maps for the East Caucasian language family, inspired by the Typological Atlas of the Languages of Daghestan (TALD, <https://lingconlab.ru/tald/>). It leverages 'ggplot2' to create visually informative maps, displaying rectangles for each language and allowing for color-coding based on linguistic features. The package includes a built-in dataset of 56 languages and the template for their distribution and provides flexibility to customize the tile map's appearance. The default template can be modified via the ability to hide or rename languages. It's designed to be used with external data tables containing language information and features, offering a tool for visualizing the geographic distribution and linguistic characteristics of East Caucasian languages.

URL <https://LingConLab.github.io/RCaucTile/>,
<https://github.com/LingConLab/RCaucTile/>

License GPL (>= 3)

Encoding UTF-8

LazyData true

Depends R (>= 4.1.0)

Imports ggplot2, scales

RoxygenNote 7.3.3

NeedsCompilation no

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Repository CRAN

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ec_languages	*Catalogue of East Caucasian languages*

Description

A dataset containes metadata on East Caucasian languages that helps RCaucTile to function.

Usage

```
ec_languages
```

Format

A data frame with 56 rows and 11 variables:

language - language name

x - suggested x coordinate for the tile map

y - suggested y coordinate for the tile map

branch - language branch

family - language family

glottocode - language glottocode

language_color - suggested language color

branch_color - suggested branch color

abbreviation - suggested abbreviation

morning_greetings This variable contains values from the "Morning Greetings" chapter (Naccarato, Verhees 2021) from the Typological Atlas of the Languages of Daghestan. The languages of Daghestan can be classified into three groups according to whether they feature morning greetings including questions about the night's rest (value 'Did you wake up¿'), based on the combination of concepts like "morning" and "good" (value 'Good morning'), and both stratagies (value 'Both').

consonant_inventory_size This variable contains consonant inventory sizes based on "Phonology" chapter (Moroz 2021) from the Typological Atlas of the Languages of Daghestan.

References

Moroz, George (2021). "On phonology of East Caucasian languages". In: Typological Atlas of the Languages of Daghestan (TALD), v 2.0.0. Ed. by Michael Daniel, Konstantin Filatov, Timur Maisak, George Moroz, Timofey Mukhin, Chiara Naccarato and Samira Verhees. Moscow: Linguistic Convergence Laboratory, NRU HSE. DOI: 10.5281/zenodo.6807070. https://lingconlab.ru/tald.

Naccarato, Chiara and Samira Verhees (2021). "Morning greetings". In: Typological Atlas of the Languages of Daghestan (TALD), v 2.0.0. Ed. by Michael Daniel, Konstantin Filatov, Timur Maisak, George Moroz, Timofey Mukhin, Chiara Naccarato and Samira Verhees. Moscow: Linguistic Convergence Laboratory, NRU HSE. DOI: 10.5281/zenodo.6807070. https://lingconlab.ru/tald.

| ec_tile_map | *Draw a grid tile map for East Caucasian languages.* |

Description

Draw a grid tile map for East Caucasian languages.

Usage

```
ec_tile_map(
  data = NULL,
  feature_column = "feature",
  title = NULL,
  title_position = "left",
  annotate_feature = FALSE,
  abbreviation = TRUE,
  hide_languages = NULL,
  rename_languages = NULL,
  tile_colors = NULL,
  palette_reverse = FALSE
)
```

Arguments

data	Could be NULL, then it will print the language template. Otherwise should be a dataframe with language column annotated with some feature. Default value is NULL.
feature_column	Character vector of length 1 which specifies the column in dataframe that contains annotation for the feature to color the language template with.
title	Character vector of length 1, which specifies the title of the plot.
title_position	Character vector of length 1, which specifies the title's position. Possible values are left, center, and right. Default value is left.
annotate_feature	
	Logical variable that specifies, whether to add feature values on the tile. This especially make sense in case of numeric features. Default value is FALSE.
abbreviation	Logical variable that specifies, whether use abbreviations for languages specified in the package. Default value is TRUE.
hide_languages	Character variable that specifies, which languages should be removed from the template.
rename_languages	
	This variable maps old language names to their corresponding new names. It can be represented as:
	• either a named vector, where names are the old language names and values are the corresponding new language names.

- or a data frame with two columns: language (the old language names) and
  new_language_name (the corresponding new language names).

tile_colors   Character variable that specifies the tile color based on variable levels. Behavior
                   differs depending on the type of the feature variable.

- For numeric variables, it can be filled with a vector of 2 or 3 colors defining
  the lower, upper, and middle segments of the palette.
- For categorical variables, it can be filled with a vector of colors with the
  length equal to the number of possible values in the feature variable.
- The variable can also use palettes from the RColorBrewer and viridis
  packages.

palette_reverse

                   Logical variable that specifies, whether the colors in palettes from the RColorBrewer
                   and viridis packages should be used in reverse order.

Value

a 'ggplot2' object

Examples

```
ec_tile_map()

ec_tile_map(ec_languages,
            feature_column = "morning_greetings",
            title = "Morning greetings (Naccarato, Verhees 2021)")

ec_tile_map(ec_languages,
            feature_column = "consonant_inventory_size",
            title = "Consonant inventory size (Moroz 2021)",
            annotate_feature = TRUE)
```

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