Package ‘SDGdetector’

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**add_sdg_pattern**

Users Can Add Customized Patterns for Each SDG or Target

**Description**

Users Can Add Customized Patterns for Each SDG or Target

**Usage**

```r
add_sdg_pattern(sdg_id, x, operator = "AND", quiet = FALSE)
```

**Arguments**

- `sdg_id` SDG Goal's ID or Target's ID, in the format of 'SDGx_y', e.g., SDG1_1, SDG2_general
- `x` A vector of strings
- `operator` 'AND', 'OR' to combine a vector of keywords for identifying SDG Goals or Targets.
- `quiet` Logical. Suppress info message

**Value**

A regerx string

**Examples**

```r
terms_new <- c("improve", "farmer", "income")
add_sdg_pattern(sdg_id = 'SDG1_2', x = terms_new, operator = 'AND')
```
**codelist_panel**

*List of Names and ISO Code for Countries*

---

**Description**

List of Names and ISO Code for Countries

**Usage**

`codelist_panel`

**Format**

`codelist_panel`:

A data frame with 28941 rows and 55 columns:

- `country.name.en` Country name in English
- `iso2c, iso3c` 2 & 3 letter ISO country codes
- `year` Year ...

**Source**


---

**country_region_names**  
*Datasets of country and region names.*

---

**Description**

Datasets of country and region names.

**Usage**

`country_region_names`

**Format**

`country_region_names`: A data frame with 644 rows and 3 variables

**Author(s)**

Yingjie Li <yingjieli.edu@gmail.com>
detect_region

Detect country or region names in text for further mapping.

Usage

detect_region(x, col)

Arguments

x Data frame or a string
col Column name for text to be assessed

Value

Returns the tool text outputs.

Examples

x <- c("This paper explores the method and results from an independent evidence based assessment of Australia's progress towards the SDGs", "Last year alone, the United States experienced 14 separate billion-dollar disasters related to climate change")
col <- data.frame(x)
regions <- detect_region(x, col)

func_AND_vector

New changes:

Usage

func_AND_vector(v)

Arguments

v a vector of characters
Details

Compare to the earlier version, we made the following changes

1. Instead of combining multiple term lists by OR for one particular target, it is more intuitive and accurate to add each alternative term list to the search term table or database directly.

2. Added Look around function to more accurately match SDG targets.

Use AND to Concatenate a Vector of Terms

Value

A character

Examples

words <- c('apple', 'bean', 'food')
func_AND_vector(v = words)

func_OR_vector

Use OR to Concatenate a Vector of Terms

Description

Use OR to Concatenate a Vector of Terms

Usage

func_OR_vector(v)

Arguments

v a vector of characters

Value

A character

Examples

words <- c('apple', 'bean', 'food')
func_OR_vector(v = words)
Description

The Names, ID, and Descriptions of all the 17 SDGs and 169 Targets

Usage

list_of_un_goals_targets

Format

list_of_un_goals_targets:
A data frame with 169 rows and 3 columns:

GoalID  The ID of each SDG
GoalName The name of each SDG
target_id_un The name of each Target
target_desc_un The description for each Target

Source

https://unstats.un.org/sdgs/indicators/indicators-list/

lookaround_nearby_n  Look Around

Description

Look around to match pattern in a sentence

Usage

lookaround_nearby_n(word_ls1, word_ls2, n, exclude = "", third_AND_string = "")

Arguments

word_ls1 is a string, which includes a list of words connected by "|" that indicates 'OR'
word_ls2 is a string, which includes a list of words connected by "|" that indicates 'OR'
n is a number, indicates the number of words to look around
exclude is a vector, including a list of words to be excluded from match
third_AND_string similar to word_ls1 or word_ls2, it is a string that includes a list of words connected by "|" that indicates 'OR'
plot_sdg_bar

Value
A regex string

Examples
con1 <- c('apple', 'bean', 'food')
con2 <- c('big', 'delicious')
lookaround_nearby_n(word_ls1 = con1, word_ls2 = con2, n = 2, exclude = "", third_AND_string = ")

data("sdgstat")
plot_sdg_bar(sdgstat, sdg = "SDG", value = "Value")
### plot_sdg_map

**SDG Map Plot**

**Description**

SDG map plot

**Usage**

```r
plot_sdg_map(data, sdg = sdg, value = value, 
              country = country, by_sdg = TRUE)
```

**Arguments**

- **data**: Data frame as the input
- **sdg**: Vector with SDG code to be visualized.
- **value**: The value, e.g., number of SDGs, to be show in the thematic map
- **country**: Country that are associated with the SDGs.
- **by_sdg**: If mapping by SDG, TRUE or FALSE.

**Value**

Returns the tool text outputs.

**Examples**

```r
data("sdgstat")
plot_sdg_map(sdgstat, 
             sdg = "SDG", value = "Value", 
             country = "Country", by_sdg = FALSE
)
```

### SDGdetector

**Identify SDGs in text**

**Description**

Identify 17 Sustainable Development Goals and associated 169 targets in text.

**Usage**

```r
SDGdetector(x, col, quiet = FALSE)
```
**Arguments**

- `x` Data frame or a string
- `col` Column name for text to be assessed
- `quiet` Logical. Suppress info message

**Details**

In 2015, leaders worldwide adopted 17 Sustainable Development Goals (SDGs) with 169 targets to be achieved by 2030 (https://sdgs.un.org). The framework of SDGs serves as a blueprint for shared prosperity for both people and the earth. **SDGdetector** identifies both direct and indirect expressions of SDGs and associated targets in chunks of text. It takes a data frame with a specified column of text to process as inputs and outputs a data frame with original columns plus matched SDGs and targets.

**Value**

Data frame with the same columns as the df plus one extra column named "sdgs", which list the occurrence (or hits) of SDG goals or targets detected from each sentence in rows. Users can further use our function `summarize_sdg()` to clean the result for visualization.

**Examples**

```r
my_col <- c("our goal is to end poverty globally", "this product contributes to slowing down climate change")
my_text <- data.frame(my_col)
SDGdetector(my_text, my_col)
```

---

**sdgstat**

Datasets of SDG statistics.

**Description**

Datasets of SDG statistics.

**Usage**

`sdgstat`

**Format**

`sdgstat`: A data frame with 62 rows and 4 variables

**Author(s)**

Yingjie Li <yingjieli.edu@gmail.com>
### sdg_color

#### Color scheme for the 17 SDGs

**Description**

Color scheme for the 17 SDGs

**Usage**

```r
sdg_color(x)
```

**Arguments**

- `x` A number, which indicates the SDG ID

**Value**

HTML color code of a specified SDG

**Examples**

```r
sdg_color(1)
sdg_color(x = 1:17)
```

---

### sdg_icon

#### Icons for SDGs

**Description**

The `sdg_icon` function provides the specific icon for each SDG

**Usage**

```r
sdg_icon(x, res = 200)
```

**Arguments**

- `x` Numeric code for each SDG, ranging from 1 to 17
- `res` Resolution of SDG icon. Default: `res = 200` indicates resizing proportionally to 200px

**Examples**

```r
sdg_icon(x = 17, res = 300)
```
## sdg_icons

*List SDG Icons*

**Description**

List SDG Icons

**Usage**

```r
dg_icons
```

**Format**

sdg_icons: External pointer of class "magick-image"

**Source**


## SDG_keys

*SDG_keys*

**Description**

Database of SDG search terms

Datasets of SDG keys.

**Usage**

```r
data(SDG_keys)
```

**Format**

An object of class `data.frame` with 557 rows and 3 columns.

SDG_keys: A data frame with 557 rows and 3 variables

**Details**

The search terms are developed at the “Target” level (SDG Goal/Target/Indicator) to extract SDG-related statements. These SDG search terms can be "direct mention", such as "SDG 1", or "indirect mention", which means a statement aligns with the description of certain SDGs or targets. For example, "Our company has embraced CO2 emissions mitigation as a priority within our sustainability strategy") is an indirect mention of "SDG 13.a" ("Implement the commitment... in the context of meaningful mitigation actions and ....").
Author(s)
Yingjie Li <yingjieli.edu@gmail.com>

Examples
data(SDG_keys)

---

Datasets of shapefiles.

Description
Datasets of shapefiles.

Usage
shp

Format
shp: A data frame with 241 rows and 6 variables

Author(s)
Yingjie Li <yingjieli.edu@gmail.com>

summarize_sdg

Description
Summarize results from SDGdetector at either the Goal level or Target level.

Usage
summarize_sdg(data, sum_by = "target", quiet = FALSE)

Arguments
data Data frame or a string
sum_by The group level to be chosen for data summary. Default parameter is "target", and can also set at "goal" level.
quiet Logical. Suppress info message
summarize_sdg

Value

Data frame with at least one column named "SDG" or "Target", and one column `Freq` that represent the total hits.

Examples

```r
library(SDGdetector)
df <- data.frame(col = c('our goal is to end poverty globally', 'this product contributes to slowing down climate change'))
data <- SDGdetector(x = df, col = col)
summarize_sdg(data, sum_by = 'target', quiet = FALSE)
```
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