

Package ‘gldata’

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Title 'Global Data Lab' R API

Version 0.3

Description Retrieve datasets from the 'Global Data Lab' website <<https://globaldatalab.org>> directly into R data frames. Functions are provided to reference available options (indicators, levels, countries, regions) as well.

Depends R (>= 3.4)

Imports httr2, methods

Suggests magrittr

URL <https://docs.globaldatalab.org/gldata/>,
<https://github.com/GlobalDataLab/R-data-api>

BugReports <https://github.com/GlobalDataLab/R-data-api/issues>

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GDLSession-class	<i>GDLSession class</i>
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Description

GDLSession class

gdl_countries	<i>Get country list</i>
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Description

Returns a list of countries available in the current dataset.

Usage

gdl_countries(session)

Arguments

session A valid GDL session object to interface with.

Value

A data frame containing a list of countries for the dataset.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
# Request list of countries  
countries <- gdl_countries(session)  
head(countries, n=10)  
  
## End(Not run)
```

gdl_datasets	<i>Get dataset list</i>
--------------	-------------------------

Description

Returns a list of datasets available.

Usage

```
gdl_datasets(session)
```

Arguments

`session` A valid GDL session object to interface with.

Value

A data frame containing a list of datasets.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
# Request list of datasets  
datasets <- gdl_datasets(session)  
head(datasets, n=10)  
  
## End(Not run)
```

gdl_indicators *Get indicator list*

Description

Returns the list of indicators available in the current dataset.

Usage

```
gdl_indicators(session)
```

Arguments

session A valid GDL session object to interface with.

Value

A data frame containing a list of indicators for the dataset.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
# Request list of available indicators for 'geos' dataset  
indicators <- session |> set_dataset('geos') |> gdl_indicators()  
  
## End(Not run)
```

gdl_levels *Get level list*

Description

Returns a list of data levels available in the current dataset.

Usage

```
gdl_levels(session)
```

Arguments

session A valid GDL session object to interface with.

Value

A data frame containing a list of levels for the dataset.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
# Request list of available levels  
levels <- gdl_levels(session)  
head(levels, n=10)  
  
## End(Not run)
```

gdl_regions	<i>Get region list</i>
-------------	------------------------

Description

Returns a list of regions available for a particular country.

Usage

```
gdl_regions(session, country)
```

Arguments

session	A valid GDL session object to interface with.
country	An ISO3 country code.

Value

A data frame containing a list of regions for the country.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
# Request list of regions for India  
regions <- gdl_regions(session, 'IND')  
head(regions, n=10)  
  
## End(Not run)
```

gdl_request *Data request function*

Description

Data request function

Usage

```
gdl_request(session)
```

Arguments

session A valid GDL session object to interface with.

Value

A data frame containing the data returned from the GDL API.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
# Customize parameters  
session <- set_indicator(session, 'iwi')  
session <- set_country(session, 'IND')  
# Finally, request the data from GDL  
iwi_india <- gdl_request(session)  
iwi_india[1:5, 3:8]  
# (showing only the five rows and columns for illustrative purposes)  
  
## End(Not run)
```

gdl_session *GDL session constructor*

Description

Returns a new GDL session object

Usage

```
gdl_session(token)
```

Arguments

token A valid GDL API token, obtainable from GlobalDataLab.org

Value

A GDL session object for the token with default indicators set.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
  
## End(Not run)
```

set_countries	<i>Set countries to retrieve data for</i>
---------------	---

Description

The countries to retrieve GDL indicator data for.

Usage

```
set_countries(session, countries)
```

Arguments

session	A valid GDL session object to interface with.
countries	A vector of ISO3 country codes.

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
# Customize parameters  
session <- set_dataset(session, 'shdi')  
session <- set_countries(session, c('BEL', 'LUX', 'NLD'))  
  
## End(Not run)
```

set_countries_all *Set session to retrieve data for all available countries*

Description

Switch the session to retrieve data for all available countries, rather than a specific set of countries.

Usage

```
set_countries_all(session)
```

Arguments

session A valid GDL session object to interface with.

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
session <- set_countries_all(session)  
  
## End(Not run)
```

set_country *Set country to retrieve data for*

Description

The country to retrieve GDL indicator data for.

Usage

```
set_country(session, country)
```

Arguments

session A valid GDL session object to interface with.
country An ISO3 country code.

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
session <- set_country(session, 'IND')  
  
## End(Not run)
```

set_dataset	<i>Set session to retrieve data from a particular dataset</i>
-------------	---

Description

Switch the session to retrieve data from the dataset specified.

Usage

```
set_dataset(session, dataset)
```

Arguments

session	A valid GDL session object to interface with.
dataset	Dataset identifier (string)

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
session <- set_dataset(session, 'shdi')  
  
## End(Not run)
```

`set_extrapolation_years_linear`*Set the number of years to extrapolate linearly.*

Description

Sets the number of years to linearly extrapolate at dataset edges. Turns extrapolation on if it isn't already. Overrides the number of nearest years if set.

Usage

```
set_extrapolation_years_linear(session, years)
```

Arguments

<code>session</code>	A valid GDL session object to interface with.
<code>years</code>	Number of years to extrapolate (integer)

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
session <- set_extrapolation_years_linear(session, 3)  
  
## End(Not run)
```

`set_extrapolation_years_nearest`*Set the number of years to fill out using nearest available data*

Description

Sets the number of years to fill out using nearest available data at dataset edges, as a means of extrapolation. Turns extrapolation on if it isn't already. Overrides the number of years to linearly extrapolate if set.

Usage

```
set_extrapolation_years_nearest(session, years)
```

Arguments

session A valid GDL session object to interface with.
years Number of years to copy (integer)

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
session <- set_extrapolation_years_nearest(session, 3)  
  
## End(Not run)
```

set_indicator *Set the indicator to retrieve*

Description

Sets the indicator to retrieve from the dataset.

Usage

```
set_indicator(session, indicator)
```

Arguments

session A valid GDL session object to interface with.
indicator Indicator to retrieve (string)

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
session <- set_indicator(session, 'iwi')  
  
## End(Not run)
```

set_indicators	<i>Set the indicators to retrieve</i>
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Description

Sets the indicators to retrieve from the dataset.

Usage

```
set_indicators(session, indicators)
```

Arguments

session	A valid GDL session object to interface with.
indicators	Vector of indicators to retrieve (string)

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdL_session(Sys.getenv('GDL_API_TOKEN'))  
session <- set_indicators(session, c('fridge', 'cellphone', 'tv'))  
  
## End(Not run)
```

set_interpolation	<i>Set interpolation state</i>
-------------------	--------------------------------

Description

Turns interpolation on (T) or off (F).

Usage

```
set_interpolation(session, state)
```

Arguments

session	A valid GDL session object to interface with.
state	Whether or not to use interpolation (boolean)

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
session <- set_interpolation(session, TRUE)  
  
## End(Not run)
```

set_levels	<i>Set data levels to retrieve data for</i>
------------	---

Description

Specify which data levels to retrieve data for. A list of levels may be obtained through `gdl_levels`.

Usage

```
set_levels(session, levels)
```

Arguments

session	A valid GDL session object to interface with.
levels	Vector of level identifiers (integers)

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
session <- set_levels(session, c(1,4))  
  
## End(Not run)
```

set_transposed	<i>Enable transposition of years to variables.</i>
----------------	--

Description

This enables transposition of years to variables. Note that this only applies to single-variable queries.

Usage

```
set_transposed(session, value)
```

Arguments

session	A valid GDL session object to interface with.
value	Turn transposition on (TRUE) or off (FALSE).

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
session <- set_transposed(session, TRUE)  
  
## End(Not run)
```

set_year	<i>Set year to retrieve data for</i>
----------	--------------------------------------

Description

Specify which year to retrieve data for. Only used when retrieving multiple indicators at once.

Usage

```
set_year(session, year)
```

Arguments

session	A valid GDL session object to interface with.
year	Year to retrieve data for (integer)

Value

An amended GDL session object.

Examples

```
## Not run:  
# Create a session using your API token (provided by environment here)  
session <- gdl_session(Sys.getenv('GDL_API_TOKEN'))  
session <- set_year(session, 2021)  
  
## End(Not run)
```

show.GDLSession	<i>GDLSession show function</i>
-----------------	---------------------------------

Description

This is a user-friendly show function for the GDLSession class, hiding internals from simple print statements.

Usage

```
show.GDLSession
```

Format

An object of class character of length 1.

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