Package 'acledR'

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Type Package

Title Manipulate ACLED Data

Version 0.1.0

Description Tools working with data from ACLED (Armed Conflict Location and Event Data). Functions include simplified ac-
cess to ACLED's API (<https://apidocs.acleddata.com/>), methods for keeping local versions of ACLED data up-to-date, and functions for common ACLED data transformations.

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BugReports <https://github.com/dtacled/acledR/issues>

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Contents

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acled_access   *Store your ACLED access information into your session.*

Description

Simple function to authenticate and store (through `Sys.setenv()`) ACLED access key for the acled_api() function. If email and key is stored via acled_access, the email and key arguments for acled_api can be NULL.

Usage

```
acled_access(email, key)
```

Arguments

email	This is the email that you register in the ACLED Access portal (https://developer.acleddata.com/)
key	This is the key generated by the ACLED Access portal.

Value

Returns a success message if ACLED credentials are successfully authorized

See Also

ACLED API Access guide <https://acleddata.com/download/35300/>

Other API and Access: `acled_api()`, `acled_deletions_api()`, `acled_update()`

Examples

```
## Not run:
acled_access(email = "your_email", key = "your_key")
Sys.getenv("acled_email")
Sys.getenv("acled_key")

## End(Not run)
```

---

acled_api   *Request data from ACLED API*

Description

This function allows users to easily request data from the ACLED API. Users can include variables
such as country, regions, dates of interest and the format (monadic or dyadic). The function returns
a tibble of the desired ACLED events.

Usage

```
acled_api(
  email = NULL,
  key = NULL,
  country = NULL,
  regions = NULL,
  start_date = floor_date(Sys.Date(), "year") - years(1),
  end_date = Sys.Date(),
  timestamp = NULL,
  event_types = NULL,
  population = "none",
  inter_numeric = FALSE,
  monadic = FALSE,
  ...,
  acled_access = TRUE,
  prompt = TRUE,
  log = FALSE
)
```

Arguments

email	character string. Email associated with your ACLED account registered at `https://developer.acleddata.com`.
key	character string. Access key associated with your ACLED account registered at `https://developer.acleddata.com`.
country	character vector. Default is NULL, which will return events for all countries. Pass a vector of countries names to retrieve events from specific countries. The list of ACLED countries. names may be found via acledR::acled_countries.

regions	vector of region names (character) or region codes (numeric). Default is NULL, which will return events for all regions. Pass a vector of regions names or codes to retrieve events from countries. within specific regions. The list of ACLED regions may be found via acledR::acled_regions.
start_date	character string. Format 'yyyy-mm-dd'. The earliest date for which to return events. The default is 1997-01-01, which is the earliest date available.
end_date	character string. Format 'yyyy-mm-dd'. The latest date for which to return events. The default is Sys.Date(), which is the most present date.
timestamp	numerical or character string. Provide a date or datetime written as either a character string of yyyy-mm-dd or as a numeric Unix timestamp to access all events added or updated after that date.
event_types	vector of one or more event types (character). Default is NULL, which will return data for all event types. To reurn data for only specific event types, request one or more of the following options (not case sensitive): Battles, Violence against civilians, Protests, Riots, Strategic Developments, and Explosions/Remote violence.
population	character. Specify whether to return population estimates for each event. It accepts three options: "none" (default), "best", and "full".
inter_numeric	logical. If FALSE (default), interaction code columns (inter1, inter2, and interaction) returned as strings describing the actor types/interactions. If TRUE, the values are returned as numeric values.
monadic	logical. If FALSE (default), returns dyadic data. If TRUE, returns monadic actor1 data.
...	string. Any additional parameters that users would like to add to their API calls (e.g. interaction or ISO)
acled_access	logical. If TRUE (default), you have used the acled_access function and the email and key arguments are not required.
prompt	logical. If TRUE (default), users will receive an interactive prompt providing information about their call (countries requested, number of estimated events, and number of API calls required) and asking if they want to proceed with the call. If FALSE, the call continues without warning, but the call is split and returns a message specifying how many calls are being made.
log	logical. If TRUE, it provides a dataframe with the countries and days requested, and how many calls it entails. The dataframe is provided INSTEAD of the normal ACLED dataset.

Value

Returns a tibble of of ACLED events.

See Also

- ACLED API guide. https://apidocs.acleddata.com/

Other API and Access: acled_access(), acled_deletions_api(), acled_update()

Examples

```
## Not run:

# Get all the events coded by ACLED in Argentina from 01/01/2022 until 02/01/2022
# in dyadic-wide form
argen_acled <- acled_api(
  email = "your_email", key = "your_key",
  country = "Argentina", start_date = "2022-01-01", end_date = "2022-02-01",
  acled_access = FALSE
)

# tibble with all the events from Argentina where each row is one event.
argen_acled

# Get all events coded by ACLED in the Caribbean from 01/01/2022 to 10/01/2022
# in monadic-long form using email and key saved in environment

acled_access(email = "your_email", key = "your_key")
carib_acled <- acled_api(
  regions = "Caribbean", start_date = "2022-01-01",
  end_date = "2022-01-10", monadic = TRUE, acled_access = TRUE
)

## Tibble with all the events from the Caribbean where each row is one actor
carib_acled

## End(Not run)
```

---

acled_codebook　　　　　*ACLED Codebook*

Description

Codebook for ACLED data

Usage

```
acled_codebook
```

Format

A data frame:

Variable Variable names

Description Text description of each variable

Values Text description of values for each variable

See Also

Other Data: acled_countries, acled_event_categories, acled_interaction_codes, acled_multipliers, acled_old_deletion_dummy, acled_old_dummy, acled_regions

---

acled_countries *ACLED Countries*

Description

ACLED country names, regions, and coding start year

Usage

```
acled_countries
```

Format

A data frame:

country Country names

region Region names

start_year First year coded by ACLED

See Also

Other Data: acled_codebook, acled_event_categories, acled_interaction_codes, acled_multipliers, acled_old_deletion_dummy, acled_old_dummy, acled_regions

---

acled_deletions_api *Request data from the ACLED Deletions API*

Description

This function allows users to pull deleted ACLED event IDs from the Deletions API.

Usage

```
acled_deletions_api(
  email = NULL,
  key = NULL,
  date_deleted = NULL,
  acled_access = TRUE,
  log = FALSE
)
```

Arguments

`email`	character string. Email associated with your ACLED account registered at `https://developer.acleddata.com`.
`key`	character string. Access key associated with your ACLED account registered at `https://developer.acleddata.com`.
`date_deleted`	character string. Format 'yyyy-mm-dd' or Unix timestamp. The query will return all deleted events including and after the requested date/timestamp.
`acled_access`	logical. If TRUE it means that you have utilized the acled_access function and there is no need for the email and key arguments.
`log`	Only for testing purposes: you can use this to check if all the variables in your call were handled properly.

Value

Returns a tibble of ACLED data with columns for event_id_cnty and deleted_timestamp.

See Also

- ACLED API guide
- Keeping ACLED data up to date guide

Other API and Access: `acled_access()`, `acled_api()`, `acled_update()`

Examples

```
## Not run:

# Request deleted ACLED events since January 1, 2022
acled_deletions_api(date_deleted = "2022-01-01", acled_acess = TRUE)

## End(Not run)
```

---

acled_event_categories

ACLED Event Categories

Description

ACLED event and sub-event types, grouped by category

Usage

```
acled_event_categories
```

Format

A data frame:

event_type ACLED event type

sub_event_type ACLED sub-event type

political_violence Dummy indicator for whether sub-event type falls within political violence

organized_political_violence Dummy indicator for whether sub-event type falls within organized
political violence

disorder Dummy indicator for whether sub-event type falls within disorder

demonstrations Dummy indicator for whether sub-event type falls within demonstrations

See Also

Other Data: `acled_codebook`, `acled_countries`, `acled_interaction_codes`, `acled_multipliers`,
`acled_old_deletion_dummy`, `acled_old_dummy`, `acled_regions`

---

acled_interaction_codes
ACLED interaction codes

Description

ACLED interaction and actor types

Usage

```
acled_interaction_codes
```

Format

A data frame:

Inter1/Inter2 Actor type

Numeric Code Numeric equivalent found in the inter1 and inter2 column.

See Also

Other Data: `acled_codebook`, `acled_countries`, `acled_event_categories`, `acled_multipliers`,
`acled_old_deletion_dummy`, `acled_old_dummy`, `acled_regions`

---

acled_multipliers   *ACLED Multipliers*

Description

A dataframe with additional information for each country, only for the purpose of estimating events.

Usage

```
acled_multipliers
```

Format

A data frame:

country Country names

bin Bin of event frequency

year Year corresponding to the bin

avg_month_bin Average monthly of the bin

See Also

Other Data: acled_codebook, acled_countries, acled_event_categories, acled_interaction_codes, acled_old_deletion_dummy, acled_old_dummy, acled_regions

---

acled_old_deletion_dummy

Second dummy data frame of ACLED events emulating an old format, used in acled_deletion_api Vignette

---

Description

Large dataset of multiple regions and countries, purposefully including deleted/modified events.

Usage

```
acled_old_deletion_dummy
```

Format

A data frame:

event_id_cnty An unique individual identifier by number and country acronym (updated annually)

event_date The day, month and year on which an event took place

year The year in which an event took place

time_precision A numeric code indicating the level of certainty of the date coded for the event

disorder_type Type of disorder associated with the event and sub event type

event_type The type of event

sub_event_type The type of sub-event

actor1 The named actor involved in the event. Note: Actor 1 and Actor 2 do not imply directionality (e.g. attacker or defender)

assoc_actor_1 The named actor associated with or identifying actor1

inter1 A numeric code indicating the type of actor1

actor2 The named actor involved in the event. Note: Actor 1 and Actor 2 do not imply directionality (e.g. attacker or defender)

assoc_actor_2 The named actor associated with or identifying actor1

inter2 A numeric code indicating the type of actor1

interaction A numeric code indicating the interaction between types of actor1 and actor2

civilian_targeting Column referencing the presence of civilian targeting

iso A numeric code for each individual country

region The region of the world where the event took place

country The country in which the event took place

admin1 The largest sub-national administrative region in which the event took place

admin2 The second largest sub-national administrative region in which the event took place

admin3 The third largest sub-national administrative region in which the event took place

location The location in which the event took place

latitude The latitude of the location

longitude The longitude of the location

geo_precision A numeric code indicating the level of certainty of the location coded for the event

source The source of the event report

source_scale The scale (local, regional, national, international) of the source

notes A short description of the event

fatalities The number of reported fatalities which occurred during the event

tags Tags associated with the event.

timestamp Numeric code of time

See Also

Other Data: `acled_codebook`, `acled_countries`, `acled_event_categories`, `acled_interaction_codes`, `acled_multipliers`, `acled_old_dummy`, `acled_regions`

---

acled_old_dummy	*A dummy data frame of ACLED events emulating an old format, used in "Keeping your dataset updated" Vignette*

Description

Small dataset of events in Argentina, purposefully including events which are currently deleted/modified.

Usage

```
acled_old_dummy
```

Format

A data frame:

event_id_cnty An unique individual identifier by number and country acronym (updated annually)

event_date The day, month and year on which an event took place

year The year in which an event took place

time_precision A numeric code indicating the level of certainty of the date coded for the event

disorder_type Type of disorder associated with the event and sub event type

event_type The type of event

sub_event_type The type of sub-event

actor1 The named actor involved in the event. Note: Actor 1 and Actor 2 do not imply directionality (e.g. attacker or defender)

assoc_actor_1 The named actor associated with or identifying actor1

inter1 A numeric code indicating the type of actor1

actor2 The named actor involved in the event. Note: Actor 1 and Actor 2 do not imply directionality (e.g. attacker or defender)

assoc_actor_2 The named actor associated with or identifying actor1

inter2 A numeric code indicating the type of actor1

interaction A numeric code indicating the interaction between types of actor1 and actor2

civilian_targeting Column referencing the presence of civilian targeting

iso A numeric code for each individual country

region The region of the world where the event took place

country The country in which the event took place

admin1 The largest sub-national administrative region in which the event took place

admin2 The second largest sub-national administrative region in which the event took place

admin3 The third largest sub-national administrative region in which the event took place

location The location in which the event took place

latitude The latitude of the location

longitude The longitude of the location

geo_precision A numeric code indicating the level of certainty of the location coded for the event

source The source of the event report

source_scale The scale (local, regional, national, international) of the source

notes A short description of the event

fatalities The number of reported fatalities which occurred during the event

tags Tags associated with the event.

timestamp Numeric code of time

See Also

Other Data: `acled_codebook`, `acled_countries`, `acled_event_categories`, `acled_interaction_codes`, `acled_multipliers`, `acled_old_deletion_dummy`, `acled_regions`

---

acled_regions   *ACLED Regions*

Description

ACLED region names, region numbers, and coding start dates

Usage

```
acled_regions
```

Format

A data frame:

region Region number

region_name Region names

first_event_date First date (yyyy-mm-dd) coded by ACLED

See Also

Other Data: `acled_codebook`, `acled_countries`, `acled_event_categories`, `acled_interaction_codes`, `acled_multipliers`, `acled_old_deletion_dummy`, `acled_old_dummy`

---
acled_rounding   *Rounding function*

Description

This function addresses some of the conflicts of rounding in R, especially when trying to round up.

Usage

```
acled_rounding(num, digits = 0)
```

Arguments

num   int. This is the number we are trying to round.

digits   int. Where do we want to round up. It accepts 0 (whole number), 1 (tenth place),
             2 (hundredths), etc.

Details

This function is meant to address the problem of rounding in R where the approach is always round to even. The function is meant to round things following the simple rule. If the decimal is 5+ then round up, if not round down. With the 'digits' argument, one can set up the specificity of the rounding, 0= whole number, 1 = tenth place, 2=hundreds place, and so on.

Value

A rounded numeric value

Examples

```
x1 <- 1.569
x2 <- 104.530
x3 <- 54.430
x4 <- 205.49999
acled_rounding(x1)
acled_rounding(x2)
acled_rounding(x3)
acled_rounding(x4)
```

acled_transform_interaction

Change interaction codes from numeric labels to string labels

Description

This function allows users to change from numeric interaction codes (i.e. 1, 2, 3, etc) to string interaction codes (i.e. State Forces, Rebel Group, etc.)

Usage

```
acled_transform_interaction(df, only_inters = FALSE)
```

Arguments

df	dataframe. ACLED data including at least inter1, inter2 columns. If only_inters is TRUE, it also requires interaction column.
only_inters	boolean. Option whether to include the *interaction* column in the transformation (if TRUE) or to only use *inter1* and *inter2* (if FALSE).

Value

Returns a tibble of of ACLED events with modified *inter1*, *inter2* and potentially *interaction* columns .

See Also

Other Data Manipulation: acled_transform_longer(), acled_transform_wider()

Examples

```
## Not run:

# Load data frame
argen_acled <- acled_api(
  email = "your_email", key = "your_key",
  country = "Argentina", start_date = "2022-01-01", end_date = "2022-02-01",
  acled_access = FALSE
)

# Transform the interactions
argen_acled_transformed <- acled_transformation_interaction(argen_acled, only_inters = F)

## End(Not run)
```

acled_transform_longer

Transform ACLED data from wide to long

Description

Function to convert your ACLED's API calls (if dyadic) into desired monadic forms.

Usage

```
acled_transform_longer(data, type = "full_actors")
```

Arguments

data   dataframe or tibble containing your dataset.

type   character string. One of five types: full_actors, main_actors, assoc_actors, source, or all.

- full_actors: All actor and associated actor columns
- main_actors: Actor 1 and Actor 2 columns
- assoc_actors: All associated actor columns
- source: The source column becomes monadic

Value

A tibble with the data transformed into long form.

See Also

Other Data Manipulation: acled_transform_interaction(), acled_transform_wider()

Examples

```
## Not run:
# argen_acled <- acled_api(country = "Argentina",start_date = "2022-01-01",
#                          end_date="2022-02-01", acled_access = T, prompt = F)

# argen_acled_long_actors <- acled_transform_wide_to_long(argen_acled,
#                                                  type = "full_actor") # Transforming the data

# nrow(argen_acled_long_actors) # Number of rows in the dataset
# [1] 263 # Long form

# nrow(argen_acled) ) # Number of rows in the dataset
# [1] 145 # Wide form

## End(Not run)
```

---

acled_transform_wider *Reverse Transform ACLED Data from Long to Wide*

Description

Function to convert your ACLED's API calls (if monadic) back into the original dyadic forms.

Usage

```
acled_transform_wider(data, type = "full_actors")
```

Arguments

data	a dataframe or tibble containing your dataset.
type	a character string. One of five types: full_actors, main_actors, assoc_actors, source, or all.

- full_actors: All actor and associated actor columns
- main_actors: Actor 1 and Actor 2 columns
- assoc_actors: All associated actor columns
- source: The source column becomes dyadic
- api_monadic: Use this option for data that is the output of the API's monadic option.

Value

A tibble with the data transformed back into wide form.

See Also

Other Data Manipulation: acled_transform_interaction(), acled_transform_longer()

Examples

```
## Not run:
# argen_acled <- acled_api(country = "Argentina",start_date = "2022-01-01",
#                          end_date="2022-02-01", acled_access = T, prompt = F)
# argen_acled_long_actors <- acled_transform_longer(argen_acled,
#                     type = "full_actor") # Transforming the data to long form

# argen_acled_wide <- acled_transform_wider(argen_acled_long_actors,
#                     type = "full_actor") # Transforming the data back to wide form

# nrow(argen_acled_wide) # Number of rows in the dataset
# [1] 145 # Wide form

# nrow(argen_acled_long_actors) # Number of rows in the dataset
# [1] 263 # Long form

## End(Not run)
```

---

acled_update   *Updating your ACLED dataset*

Description

This function is meant to help you keep your dataset updated, by automatically checking for new and modified events, as well as deleted events (if deleted = TRUE). Note: The function makes new API calls to gather new and modified events.

Usage

```
acled_update(
  df,
  start_date = min(df$event_date),
  end_date = max(df$event_date),
  additional_countries = "current countries",
  regions = NULL,
  event_types = NULL,
  acled_access = TRUE,
  email = NULL,
  key = NULL,
  inter_numeric = FALSE,
  deleted = TRUE,
  prompts = TRUE
)
```

Arguments

df	The dataframe to update, it has to have the same structure as ACLED's dyadic dataframe (i.e. the result of `acled_api()`)
start_date	The first date of events you want to update from.. These are the celling and floor of *event_date*, not of *timestamp*.
end_date	The last date of events you want to update from. These are the celling and floor of *event_date*, not of *timestamp*.
additional_countries	
	string. Additional additional_countries to update your dataset. It defaults to "current countries", which includes all the additional_countries inside your dataset.
regions	string. The regions for which you would like events in your dataset updated.
event_types	string. The event types for which you would like events in your dataset updated.
acled_access	logical. If you have already used acled_access(), you can set this option as TRUE (default) to avoid having to input your email and access key.
email	character string. Email associated with your ACLED account registered at `https://developer.acleddata.com`.
key	character string. Access key associated with your ACLED account registered at `https://developer.acleddata.com`.

inter_numeric	logical. If FALSE (default), interaction code columns (inter1, inter2, and inter-action) returned as strings describing the actor types/interactions. If TRUE, the values are returned as numeric values. Must match the inter type (numeric or string) in the dataframe being updated.
deleted	logical. If TRUE (default), the function will also remove deleted events using acled_deletions_api().
prompts	logical. If TRUE (default), users will receive an interactive prompt providing information about their call (additional_countries requested, number of country-days, and number of API calls required) and asking if they want to proceed with the call. If FALSE, the call continues without warning, but the call is split and returns a message specifying how many calls are being made.

Value

Tibble with updated ACLED data and a newer timestamp.

See Also

 • ACLED Keeping your dataset updated guide. https://acleddata.com/download/35179/

Other API and Access: acled_access(), acled_api(), acled_deletions_api()

Examples

```
## Not run:
# Updating dataset to include newer data from Argentina

acledR::acled_access(email = "your_email", key = "your_key")

new_argen_dataset <- acled_update(acledR::acled_old_dummy,
  additional_countries = "Argentina",
  acled_access = TRUE,
  prompts = FALSE
)

## End(Not run)
```

Index