Package: acled.api (via r-universe)

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Title Automated Retrieval of ACLED Conflict Event Data

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Description Access and manage the application programming interface
(API) of the Armed Conflict Location & Event Data Project
(ACLED) at <https://acleddata.com/>. The package makes it easy
to retrieve a user-defined sample (or all of the available
data) of ACLED, enabling a seamless integration of regular data
updates into the research work flow. It requires a minimal
number of dependencies. See the package's README file for a
note on replicability when drawing on ACLED data. When using
this package, you acknowledge that you have read ACLED's terms
and conditions of use, and that you agree with their
attribution requirements.

URL <https://gitlab.com/chris-dworschak/acled.api>

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Imports httr, jsonlite

Suggests testthat

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acled.api   *Automated Retrieval of ACLED Conflict Event Data*

Description

Access and manage the application programming interface (API) of the Armed Conflict Location & Event Data Project (ACLED). The function `acled.api()` makes it easy to retrieve a user-defined sample (or all of the available data) of ACLED, enabling a seamless integration of regular data updates into the research work flow. If the data are intended for replicable use (e.g., later publication of analysis results), the downloaded data should be stored locally after retrieval. See the package's README file for a note on replicability when using ACLED data.

When using this package, you acknowledge that you have read ACLED's terms and conditions of use, and that you agree with their attribution requirements.

Usage

```
acled.api(
  email.address = Sys.getenv("ACLED_EMAIL_ADDRESS"),
  access.key = Sys.getenv("ACLED_ACCESS_KEY"),
  country = NULL,
  region = NULL,
  start.date = NULL,
  end.date = NULL,
  add.variables = NULL,
  all.variables = FALSE,
  dyadic = FALSE,
  interaction = NULL,
  other.query = NULL
)
```

Arguments

email.address	character string. Supply the email address that you registered with ACLED access. The email address can also be set as an environment variable using `Sys.setenv(ACLED_EMAIL_ADDRESS="your.email.address")`, in which case this argument can be skipped. Usage examples below illustrate these two approaches.
access.key	character string. Supply your ACLED access key. The access key can also be set as an environment variable using `Sys.setenv(ACLED_ACCESS_KEY="your.access.key")`, in which case this argument can be skipped. Usage examples below illustrate these two approaches.

country	character vector. Supply one or more country names to narrow down which events should be retrieved. See the details below for information on how the arguments "country" and "region" interact.
region	numeric or character vector. Supply one or more region codes (numeric) or region names (character) to narrow down which events should be retrieved. You can run get.api.regions() to view supported region codes and names, or see ACLED's API Guide. See the details below for information on how the arguments "country" and "region" interact.
start.date	character string. Supply the earliest date to be retrieved. Format: "yyyy-mm-dd".
end.date	character string. Supply the last date to be retrieved. Format: "yyyy-mm-dd".
add.variables	character vector. Supply the names of ACLED variables you wish to add to the default output (see ACLED's codebook for details). The default output includes: event_id_cnty, region, country, year, event_date, source, admin1, admin2, admin3, location, latitude, longitude, event_type, sub_event_type, interaction, fatalities, tags, and the download timestamp.
all.variables	logical. When set to FALSE (default), a narrow default selection of variables is returned (which can be refined using the argument add.variables). If set to TRUE, all variables are included in the output (overrides argument add.variables).
dyadic	logical. When set to FALSE (default), monadic data is returned (one observation per event). If set to TRUE, dyadic data is returned.
interaction	numeric vector. Supply one or more interaction codes to narrow down which events should be retrieved. See ACLED's codebook for information on which interactions are represented by which numeric codes.
other.query	character vector. Allows users to add their own ACLED API queries to the GET call. Vector elements are assumed to be individual queries, and are automatically separated by an & sign. See ACLED's API Guide for information on making your custom query.

Details

The function acled.api() is an R wrapper for the Armed Conflict Location & Event Data Project API. Internally it uses httr to access the API, and jsonlite to manage the JSON content that the call returns. The JSON data are converted into the base class data.frame. Variables are of class character by default. Variables which only contain numbers as recognized by the regular expression ^[0-9]+$ are coerced into numeric before the data.frame object is returned.

Authentification: The user's registered email address and ACLED access key, which they obtain after registering with ACLED access, can be supplied as strings directly to their respective arguments, or set in advance as environment variables using
Sys.setenv(ACLED_EMAIL_ADDRESS="your.email.address") and
Sys.setenv(ACLED_ACCESS_KEY="your.access.key").

Retrieving all data at once: If both the country argument and the region argument are NULL (default), all available countries are retrieved. The same applies to the time frame when both the start date and the end date are NULL (default). Note that the API cannot handle requests with only one

of the dates specified (either none of them or both of them need to be supplied). More recent versions of the API implemented a bandwidth limit that prevents users from retrieving larger amounts of data in a single call. At the time of this writing (v. `acled.api()` 1.1.8), ACLED recommends using pagination to retrieve data in separate calls of 5000 rows each. This is much less than what is actually possible to retrieve in a single call, and with a full dataset of >2 million rows, pagination is less practicable than simply downloading by individual regions or time periods. The separate data chunks obtained this way can then be combined using rbind(). Users who want to make use of pagination can do so using the `other.query` filter.

Filter combinations: By default, `acled.api()` combines different filters with a logical AND operator. This usually conforms with desired behavior, with the country argument and the region argument as important exception: for example, specifying the country "Togo" and the region "Southern Africa" leads the API to query for a country named "Togo" in the region "Southern Africa". In this case, no data will be returned as no events match this query, and it is recommended to make two separate calls, one for Togo and one for Southern Africa. More recent versions of the API also support OR operators to separate filters. These can be implemented through `acled.api()` by using the `other.query` filter. To do so, see the ACLED API Guide for details.

Value

A data frame containing ACLED events.

Author(s)

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References

Armed Conflict Location & Event Data Project (ACLED); https://acleddata.com/
Clionadh Raleigh, Andrew Linke, Havard Hegre and Joakim Karlsen. 2010. "Introducing ACLED-Armed Conflict Location and Event Data." *Journal of Peace Research* 47 (5): 651-660.

Examples

```
## Not run:
# Email and access key provided as strings:
my.data.frame1 <- acled.api(
  email.address = "your.email.address",
  access.key = "your.access.key",
  region = c(1,7),
  start.date = "2018-11-01",
  end.date = "2018-11-31")
head(my.data.frame1)

# Email and access key provided as environment variables:
my.data.frame2 <- acled.api(
  email.address = Sys.getenv("ACLED_EMAIL_ADDRESS"),
  access.key = Sys.getenv("ACLED_ACCESS_KEY"),
  region = c(1,7),
  start.date = "2020-01-01",
```

```
    end.date = "2020-11-31",
    interaction = c(10:18, 22:28),
    add.variables = c("geo_precision", "time_precision"))
sd(my.data.frame2$geo_precision)

## End(Not run)
```

get.api.regions	*ACLED API region support function*

Description

List of region names and codes as they are supplied by the ACLED API user guide.

Usage

```
get.api.regions()
```

Details

This single-purpose support function does not take arguments. It is set up as a convenient way to return region names and region codes to be used in the acled.api() main function's region argument.

Value

A list of length 2.

1. A data frame object containing ACLED region names and codes.

2. A string with version information.

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References

Armed Conflict Location & Event Data Project (ACLED) API user guide
Clionadh Raleigh, Andrew Linke, Havard Hegre and Joakim Karlsen. 2010. "Introducing ACLED-Armed Conflict Location and Event Data." *Journal of Peace Research* 47 (5): 651-660.

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