Package 'cft'

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Type Package

Title Climate Futures Toolbox

Version 1.0.0

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Description Developed as a collaboration between Earth lab and the North Central Climate Adaptation Science Center to help users gain insights from available climate data. Includes tools and instructions for downloading climate data via a 'USGS' API and then organizing those data for visualization and analysis that drive insight. Web interface for 'USGS' API can be found at <http://thredds.northwestknowledge.net:8080/thredds/reacch_climate_CMIP5_aggregated_macav2_catalog.html>.

URL https://github.com/earthlab/cft-CRAN

License GPL (>= 3)

Encoding UTF-8

Depends R (>= 3.5.0), plyr, dplyr (>= 1.0.10), osmdata, magrittr

Imports tidync, future, furrr, sf, epitools, tidyr, rlang, pipeR, rlist

Suggests lubridate, testthat (>= 3.0.0), knitr

VignetteBuilder knitr

RoxygenNote 7.2.1

Config/testthat/edition 3

NeedsCompilation no

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R topics documented:

`available_data` *Available data*

Description

Using the default web link, this package retrieves daily gridded data sets of General Circulation Model (GCM) runs clipped to areas of interest and returns a data frame of the file names and they're storage paths. Each of these data sets represent a single GCM, climate variable and Representative Concentration Pathway (RCP) from 1950 to 2099. The 1950 to 2005 portion of this time period represents historical data while the 2006 to 2099 portion represents modeled data. The original data sets may be found at http://thredds.northwestknowledge.net:8080/thredds/reacch_climate_CMIP5_aggregated_macav2_catalog.html

Usage

```
available_data(
  web_link = "https://cida.usgs.gov/thredds/dodsC/macav2metdata_daily_future",
  verbose = TRUE
)
```

Arguments

`web_link`	A web link to the api data source you want to read (character)
`verbose`	Should the api outputs be combined with internal metadata? (logical)

Value

Data.frame of requested data

`single_point_firehose` *Single point firehose*

Description

Using the default web link, this package retrieves daily gridded data sets of General Circulation Model (GCM) runs clipped to areas of interest and returns a data frame of the file names and they're storage paths. Each of these data sets represent a single GCM, climate variable and Representative Concentration Pathway (RCP) from 1950 to 2099. The 1950 to 2005 portion of this time period represents historical data while the 2006 to 2099 portion represents modeled data. The original data sets may be found at http://thredds.northwestknowledge.net:8080/thredds/reacch_climate_CMIP5_aggregated_macav2_catalog.html

Usage

```
single_point_firehose(
  input_variables,
  lat,
  lon,
  web_link = "https://cida.usgs.gov/thredds/dodsC/macav2metdata_daily_future",
  verbose = FALSE
)
```

Arguments

input_variables	Table of specifications for requested dataset: model type, date range, variables (list)
lat	Latitude specifications for area of interest (list)
lon	Longitude specifications for area of interest (list)
web_link	A web link to the api data source you want to read (character)
verbose	If True detailed processing information will be output (logical)

Value

Data.frame of requested data

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