

Package ‘COVID19’

October 12, 2020

Type Package

Title R Interface to COVID-19 Data Hub

Version 2.3.1

Description Download COVID-19 data across governmental sources at national, regional, and city level, as described in Guidotti and Ardia (2020) <doi:10.21105/joss.02376>. Includes policy measures by 'Oxford COVID-19 Government Response Tracker' <<https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker>>. Provides a seamless integration with 'World Bank Open Data' <<https://data.worldbank.org/>>, 'Google Mobility Reports' <<https://www.google.com/covid19/mobility/>>, 'Apple Mobility Reports' <<https://covid19.apple.com/mobility>>.

License GPL-3

URL <https://covid19datahub.io>

BugReports <https://github.com/covid19datahub/COVID19/issues>

Encoding UTF-8

LazyData true

Depends R (>= 3.5.0)

Imports utils, dplyr, tidyr (>= 1.0.0)

Suggests wbstats

RoxygenNote 7.1.0

NeedsCompilation no

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Repository CRAN

Date/Publication 2020-10-12 18:20:02 UTC

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covid19

*COVID-19 Data Hub***Description**

Download COVID-19 data across governmental sources at national, regional, and city level. Includes policy measures by [Oxford COVID-19 Government Response Tracker](#) and provides a seamless integration with [World Bank Open Data](#), [Google Mobility Reports](#), [Apple Mobility Reports](#).

Usage

```
covid19(
  country = NULL,
  level = 1,
  start = "2010-01-01",
  end = Sys.Date(),
  raw = TRUE,
  vintage = FALSE,
  verbose = TRUE,
  cache = TRUE,
  wb = NULL,
  gmr = NULL,
  amr = NULL
)
```

Arguments

country	vector of country names or ISO codes (alpha-2, alpha-3 or numeric).
level	integer. Granularity level. 1: country-level data. 2: state-level data. 3: lower-level data.
start	the start date of the period of interest.
end	the end date of the period of interest.
raw	logical. Skip data cleaning? Default TRUE. See details.
vintage	logical. Retrieve the snapshot of the dataset that was generated at the end date instead of using the latest version. Default FALSE.
verbose	logical. Print data sources? Default TRUE.
cache	logical. Memory caching? Significantly improves performance on successive calls. Default TRUE.
wb	character vector of World Bank indicator codes. See details.
gmr	url to the Google Mobility Report dataset. See details.
amr	url to the Apple Mobility Report dataset. See details.

Details

If `raw=FALSE`, the raw data are cleaned by filling missing dates with NA values. This ensures that all locations share the same grid of dates and no single day is skipped. Then, NA values are replaced with the previous non-NA value or 0.

Policies for administrative areas level 2 and 3 are inherited from national-level policies.

The dataset can be extended with [World Bank Open Data](#) via the argument `wb`, a character vector of indicator codes. The codes can be found by inspecting the corresponding URL. For example, the code of the GDP indicator available at <https://data.worldbank.org/indicator/NY.GDP.MKTP.CD> is `NY.GDP.MKTP.CD`. The latest data available between the `start` and `end` date are downloaded.

The dataset can be extended with [Google Mobility Reports](#) via the argument `gmr`, the url to the Google CSV file. At the time of writing, the CSV is available [here](#).

The dataset can be extended with [Apple Mobility Reports](#) via the argument `amr`, the url to the Apple CSV file. At the time of writing, the CSV is available [here](#).

Value

Grouped tibble (`data.frame`). See the [dataset documentation](#)

Note

We have invested a lot of time and effort in creating [COVID-19 Data Hub](#), please:

- cite [Guidotti and Ardia \(2020\)](#) when using [COVID-19 Data Hub](#).
- place the URL <https://covid19datahub.io> in a footnote to help others find [COVID-19 Data Hub](#).
- you assume full risk for the use of [COVID-19 Data Hub](#). We try our best to guarantee the data quality and consistency and the continuous filling of the Data Hub. However, it is free software and comes with ABSOLUTELY NO WARRANTY. Reliance on [COVID-19 Data Hub](#) for medical guidance or use of [COVID-19 Data Hub](#) in commerce is strictly prohibited.

Source

<https://covid19datahub.io>

References

Guidotti, E., Ardia, D., (2020), "COVID-19 Data Hub", Journal of Open Source Software 5(51):2376, doi: [10.21105/joss.02376](https://doi.org/10.21105/joss.02376).

Examples

```
## Not run:  
  
# Worldwide data by country  
x <- covid19()  
  
# Worldwide data by state
```

```

x <- covid19(level = 2)

# Specific country data by city
x <- covid19(c("Italy", "US"), level = 3)

# Merge with World Bank data. It may take some time...
wb <- c("gdp" = "NY.GDP.MKTP.CD", "hosp_beds" = "SH.MED.BEDS.ZS")
x <- covid19(wb = wb)

# Merge with Google Mobility Reports. It may take some time...
gmr <- "https://www.gstatic.com/covid19/mobility/Global_Mobility_Report.csv"
x <- covid19(gmr = gmr)

# Merge with Apple Mobility Reports. It may take some time...
amr <- "https://covid19-static.cdn-apple.com/covid19-mobility-data/"
amr <- paste0(amr, "2018HotfixDev23/v3/en-us/applemobilitytrends-2020-10-10.csv")
x <- covid19(amr = amr)

# Data sources
s <- covid19cite(x)
View(s)

## End(Not run)

```

covid19cite

COVID-19 Data Hub Data Sources

Description

Retrieve citation and metadata of the data sources.

Usage

```
covid19cite(x, verbose = TRUE)
```

Arguments

x dataset returned by [covid19](#).

verbose logical. Print citation? Default TRUE.

Value

data.frame of data sources.

Examples

```
## Not run:  
  
# Download data  
x <- covid19("USA")  
  
# Data Sources  
s <- covid19cite(x)  
View(s)  
  
## End(Not run)
```

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