

Package: statcanR (via r-universe)

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Type Package

Title Client for Statistics Canada's Open Economic Data

Version 0.3.0

Description Provides an R client for Statistics Canada's Web Data Service. Users can describe the data they need in natural language, search the official table catalogue, and download complete data tables in English or French as data frames. Tables formerly known as CANSIM tables are identified by Product IDs. Warin (2024) <[doi:10.5070/T5.1868](https://doi.org/10.5070/T5.1868)>.

Depends R (>= 4.0.0)

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Encoding UTF-8

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<https://github.com/warint/statcanR>

BugReports <https://github.com/warint/statcanR/issues>

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statcan_data	<i>Download a Statistics Canada data table</i>
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Description

Downloads a complete table from Statistics Canada's Web Data Service (WDS) and returns it as a data frame. Product IDs can be supplied in the familiar hyphenated form (for example, "27-10-0014-01") or as an eight-digit PID (for example, "27100014").

Usage

```
statcan_data(tableNumber, lang)
```

Arguments

tableNumber	A Statistics Canada table number or Product ID. Both "27-10-0014-01" and "27100014" are accepted.
lang	Language of the downloaded table: "eng" or "fra".

Details

The function keeps the interface used by earlier statcanR releases. English and French downloads share the same processing rules. In particular, the first column is named REF_DATE, coordinates are stored as character, and the table title from the metadata file is added as INDICATOR.

Value

A data frame containing the complete Statistics Canada table.

Examples

```
## Not run:
science <- statcan_data("27-10-0014-01", "eng")
science_fr <- statcan_data("27100014", "fra")

## End(Not run)
```

statcan_download_data *Download a Statistics Canada table and save a CSV file*

Description

Calls `statcan_data()` and also writes the returned table to a CSV file. Existing calls with only `tableNumber` and `lang` remain supported; `path` can be used to select a different output directory.

Usage

```
statcan_download_data(tableNumber, lang, path = ".")
```

Arguments

<code>tableNumber</code>	A Statistics Canada table number or Product ID. Both "27-10-0014-01" and "27100014" are accepted.
<code>lang</code>	Language of the downloaded table: "eng" or "fra".
<code>path</code>	Directory in which to save the CSV file. The directory must already exist. Defaults to the current working directory.

Value

The downloaded table. The CSV path is available in the `statcan_file` attribute of the returned data frame.

Examples

```
## Not run:
science <- statcan_download_data("27-10-0014-01", "eng")
science <- statcan_download_data(
  "27-10-0014-01", "eng", path = tempdir()
)
attr(science, "statcan_file")

## End(Not run)
```

statcan_find *Find Statistics Canada tables using a natural-language query*

Description

Interprets a short description of the data needed and returns ranked Statistics Canada table candidates. The query can contain a topic, Canadian geography, and reference year or range. For example, "R&D expenditures in Quebec since 2020" is interpreted as a research and development expenditure topic, a Quebec geography constraint, and coverage beginning in 2020.

Usage

```
statcan_find(query, lang = c("eng", "fra"), n = 5L, refresh = FALSE)
```

Arguments

query	One non-empty character string describing the desired data.
lang	Language of the table titles: "eng" or "fra".
n	Maximum number of candidates to return, from 1 to 20.
refresh	Logical; if TRUE, request a fresh catalogue and fresh candidate metadata from WDS.

Details

This function finds tables; it does not download or filter their observations. Use the returned `id` with `statcan_data()`, then apply any required geography and date filters to the downloaded data. Rankings are a discovery aid, so review the candidate title before downloading a large table.

The catalogue is cached for 24 hours. When a geography is present in the query, metadata for a small set of leading candidates is retrieved through WDS to confirm that the geography is a table member. That metadata is cached for seven days. If metadata is temporarily unavailable, candidates can still be returned with `geography_match = NA`.

Value

A data frame of ranked candidates. `id` contains the table number, `score` is the relevance score, and `match_reason` explains the ranking. Coverage dates describe the table as a whole. `geography_match` is TRUE when WDS metadata confirms every geography in the query, FALSE when it does not, and NA when no geography was requested or validation was not possible.

Examples

```
## Not run:
matches <- statcan_find(
  "R&D expenditures in Quebec since 2020",
  lang = "eng"
)
matches[, c("title", "id", "match_reason")]

## End(Not run)
```

statcan_search

Search Statistics Canada data tables

Description

Searches the catalogue of tables published through Statistics Canada's Web Data Service (WDS). The catalogue is cached for 24 hours in the user's cache directory. If WDS is temporarily unavailable, the most recent valid cache is used.

Usage

```
statcan_search(keywords, lang = c("eng", "fra"), refresh = FALSE)
```

Arguments

keywords	Character vector of words that must appear in the table title. Matching is case-insensitive.
lang	Language of the returned titles: "eng" or "fra".
refresh	Logical; if TRUE, ignore a fresh cache and request the catalogue from WDS.

Value

A `DT::datatable` containing matching table titles, Product IDs, release dates, and language.

Examples

```
## Not run:  
statcan_search(c("economy", "export"), "eng")  
statcan_search("population", "fra")  
  
## End(Not run)
```

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