Package 'ces'

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Title Access to Canadian Election Study Data

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Description Provides tools to easily access and analyze Canadian Election Study data. The package simplifies the process of downloading, cleaning, and using 'CES' datasets for political science research and analysis. The Canadian Election Study ('CES') has been conducted during federal elections since 1965, surveying Canadians on their political preferences, engagement, and demographics. Data is accessed from the 'Borealis' Data repository <https://borealisdata.ca/>, which serves as the official host for 'CES' datasets. This package is not officially affiliated with the Canadian Election Study or 'Borealis' Data, and users should cite the original data sources in their work.

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Imports dplyr, haven, tibble, utils

VignetteBuilder knitr

URL https://github.com/laurenceomfoisy/ces

BugReports https://github.com/laurenceomfoisy/ces/issues

Depends R (>= 3.5)

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Contents

`ces-package` *Canadian Election Study Data Package*

Description

Provides tools to easily access and analyze Canadian Election Study data. The package simplifies the process of downloading, cleaning, and using CES datasets for political science research and analysis. The Canadian Election Study (CES) has been conducted during federal elections since 1965, surveying Canadians on their political preferences, engagement, and demographics.

Key Functions

- `get_ces`: Download and load CES data for a specific year
- `list_ces_datasets`: List available CES datasets
- `get_ces_subset`: Get a subset of variables from a CES dataset
- `create_codebook`: Generate a comprehensive codebook for CES datasets
- `download_pdf_codebook`: Download official PDF codebooks
- `download_ces_dataset`: Download a single CES dataset
- `download_all_ces_datasets`: Download all CES datasets

Data Source

Data is accessed from the Borealis Data repository, which serves as the official host for CES datasets. This package is not officially affiliated with the Canadian Election Study or Borealis Data, and users should cite the original data sources in their work.

Author(s)

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References

For more information about the Canadian Election Study, visit: https://ces-eec.arts.ubc.ca/

See Also

Useful links:

- https://github.com/laurenceomfoisy/ces
- Report bugs at https://github.com/laurenceomfoisy/ces/issues

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`create_codebook` *Create a Codebook for Canadian Election Study Dataset*

Description

This function generates a comprehensive codebook for a CES dataset, including variable names, question labels, and response options.

Usage

```
create_codebook(data, include_values = TRUE, format = "tibble")
```

Arguments

`data`	A CES dataset, typically retrieved using `get_ces()`.
`include_values`	Logical indicating whether to include response values in addition to labels. Default is TRUE.
`format`	A character string indicating the format to return the codebook in. Default is "tibble". Options include "tibble" or "data.frame".

Value

A tibble or data.frame containing the codebook with columns for variable name, question label, and response options.

Examples

```
# Get the 2019 CES data
ces_2019 <- get_ces("2019")

# Create a codebook
codebook <- create_codebook(ces_2019)

# View the first few entries
head(codebook)

# Create a codebook without values
codebook_simple <- create_codebook(ces_2019, include_values = FALSE)
```

`download_all_ces_datasets` *Download All Canadian Election Study Datasets*

Description

This function downloads all available Canadian Election Study datasets to a specified directory. Each dataset is saved with a standardized filename in the format of `ces_<year>.<format>`, where the format extension corresponds to the original dataset format (e.g., .sav for SPSS, .dta for Stata).

Usage

```
download_all_ces_datasets(
  path = NULL,
  years = NULL,
  overwrite = FALSE,
  verbose = TRUE
)
```

Arguments

`path`	A character string indicating the directory where the datasets should be saved. If NULL (default), the datasets will be saved to the Downloads directory if available, otherwise to a temporary directory.
`years`	Optional character vector specifying which years to download. If NULL (default), all available years will be downloaded.
`overwrite`	Logical indicating whether to overwrite existing files. Default is FALSE.
`verbose`	Logical indicating whether to display detailed progress messages during download. Default is TRUE.

Value

Invisibly returns a character vector with the file paths of the downloaded datasets.

Examples

```
# Download all CES datasets to a temporary directory
download_all_ces_datasets(path = tempdir())

# Download only specific years
download_all_ces_datasets(years = c("2015", "2019", "2021"), path = tempdir())

# Download to a temporary directory with overwrite
download_all_ces_datasets(path = tempdir(), overwrite = TRUE)
```

download_ces_dataset *Download a Canadian Election Study Dataset*

Description

This function downloads a single Canadian Election Study dataset for a specified year. The dataset is saved with a standardized filename in the format of ces_<year>.<format>, where the format extension corresponds to the original dataset format (e.g., .sav for SPSS, .dta for Stata).

Usage

```
download_ces_dataset(year, path = NULL, overwrite = FALSE, verbose = TRUE)
```

Arguments

year	A character string indicating the year of the CES data to download. Available years include "1965", "1968", "1974-1980", "1984", "1988", "1993", "1997", "2000", "2004", "2006", "2008", "2011", "2015", "2019", "2021".
path	A character string indicating the directory where the dataset should be saved. If NULL (default), the dataset will be saved to the Downloads directory if available, otherwise to a temporary directory.
overwrite	Logical indicating whether to overwrite existing files. Default is FALSE.
verbose	Logical indicating whether to display detailed progress messages during download. Default is TRUE.

Value

Invisibly returns the file path of the downloaded dataset.

Examples

```
# Download the 2019 CES dataset to a temporary directory
download_ces_dataset("2019", path = tempdir())

# Download to a specific directory
download_ces_dataset("2015", path = tempdir())

# Overwrite existing file
download_ces_dataset("2021", path = tempdir(), overwrite = TRUE)
```

`download_pdf_codebook` *Download Canadian Election Study PDF Codebook*

Description

This function downloads the official PDF codebook for a specified year of the Canadian Election Study. The codebook contains detailed information about all variables, question wording, response codes, and methodological details.

Usage

```
download_pdf_codebook(year, path = NULL, overwrite = FALSE, verbose = TRUE)
```

Arguments

`year`	A character string indicating the year of the CES data. Available years include "1965", "1968", "1974-1980", "1984", "1988", "1993", "1997", "2000", "2004", "2006", "2008", "2011", "2015", "2019", "2021".
`path`	A character string indicating the directory where the codebook should be saved. If NULL (default), the codebook will be saved to the Downloads directory if available, otherwise to a temporary directory.
`overwrite`	Logical indicating whether to overwrite existing files. Default is FALSE.
`verbose`	Logical indicating whether to display detailed progress messages during download. Default is TRUE.

Value

Invisibly returns the file path of the downloaded codebook.

Examples

```
# Download the 2019 CES codebook to a temporary directory
download_pdf_codebook("2019", path = tempdir())

# Download to a temporary directory
download_pdf_codebook("2015", path = tempdir())

# Overwrite existing file
download_pdf_codebook("2021", path = tempdir(), overwrite = TRUE)
```

examine_metadata *Examine Variable Metadata in a CES Dataset*

Description

This function provides an overview of the metadata available in a CES dataset, showing which variables have labels, value labels, and other attributes.

Usage

```
examine_metadata(data, show_labels = FALSE, variable_pattern = NULL)
```

Arguments

data	A CES dataset, typically retrieved using get_ces().
show_labels	Logical indicating whether to show the actual labels. Default is FALSE.
variable_pattern	Optional regular expression to filter variables.

Value

A data.frame with metadata information for each variable.

Examples

```
# Get CES data with preserved metadata
ces_2019 <- get_ces("2019", preserve_metadata = TRUE)

# Examine metadata for all variables
metadata_overview <- examine_metadata(ces_2019)

# Examine metadata for voting-related variables, showing labels
voting_metadata <- examine_metadata(ces_2019,
                                    show_labels = TRUE,
                                    variable_pattern = "vote|ballot")
```

export_codebook *Export Codebook to CSV or Excel*

Description

This function exports a CES codebook to a CSV or Excel file for easier viewing and sharing.

Usage

```
export_codebook(codebook, file_path, ...)
```

Arguments

codebook	A codebook dataframe created with `create_codebook()`.
file_path	The path where the file should be saved, including file extension. Use .csv for CSV or .xlsx for Excel.
...	Additional arguments passed to write functions.

Value

Invisibly returns the file path where the codebook was saved.

Examples

```
## Not run:
# Get data and create codebook
ces_data <- get_ces("2019")
codebook <- create_codebook(ces_data)

# Export to CSV
export_codebook(codebook, "ces_2019_codebook.csv")

# Export to Excel
export_codebook(codebook, "ces_2019_codebook.xlsx")

## End(Not run)
```

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get_ces *Get Canadian Election Study Dataset*

Description

This function downloads and processes a Canadian Election Study dataset for the specified year.

Usage

```
get_ces(
  year,
  format = "tibble",
  language = "en",
  clean = TRUE,
  preserve_metadata = TRUE,
  use_cache = TRUE,
  verbose = TRUE
)
```

Arguments

year	A character string indicating the year of the CES data. Available years include "1965", "1968", "1974-1980", "1984", "1988", "1993", "1997", "2000", "2004", "2006", "2008", "2011", "2015", "2019", "2021".
format	A character string indicating the format to return the data in. Default is "tibble". Options include "tibble", "data.frame", or "raw".
language	A character string indicating the language of the survey questions. Default is "en" (English). Alternative is "fr" (French).
clean	Logical indicating whether to clean the data (recode variables, convert factors, etc.). Default is TRUE.
preserve_metadata	Logical indicating whether to prioritize preserving all variable metadata (labels, attributes) over standardization. Default is TRUE. This ensures all original question labels and value labels are maintained.
use_cache	Logical indicating whether to use cached data if available. Default is TRUE.
verbose	Logical indicating whether to display detailed progress messages during data retrieval and processing. Default is TRUE.

Value

A tibble or data.frame containing the requested CES data.

Note

Official PDF codebooks for each CES year are available via the download_pdf_codebook function, which provides detailed information about variables, question wording, and methodology.

Examples

```
# Get the 2019 CES data
ces_2019 <- get_ces("2019")

# Get the 1993 CES data, unprocessed
ces_1993_raw <- get_ces("1993", clean = FALSE)

# Download the official codebook to temporary directory
download_pdf_codebook("2019", path = tempdir())
```

get_ces_subset *Get Subset of Variables from Canadian Election Study Dataset*

Description

This function allows users to get a specific subset of variables from a CES dataset. It's useful for selecting only the variables of interest for a specific analysis.

Usage

```
get_ces_subset(
  year,
  variables = NULL,
  regex = FALSE,
  format = "tibble",
  clean = TRUE,
  use_cache = TRUE
)
```

Arguments

year	A character string indicating the year of the CES data.
variables	A character vector of variable names to select from the dataset. If NULL (default), all variables are returned.
regex	A logical indicating whether to use regex matching for variable names. Default is FALSE.
format	A character string indicating the format to return the data in. Default is "tibble". Options include "tibble", "data.frame", or "raw".
clean	Logical indicating whether to clean the data. Default is TRUE.
use_cache	Logical indicating whether to use cached data if available. Default is TRUE.

Value

A tibble or data.frame containing the requested CES data variables.

Examples

```
# Get only vote choice and demographic variables from 2019
variables <- c("vote_choice", "age", "gender", "province", "education")
ces_subset <- get_ces_subset("2019", variables)

# Get all variables containing "vote" in their name (using regex)
vote_vars <- get_ces_subset("2019", "vote", regex = TRUE)
```

`list_ces_datasets` *List Available Canadian Election Study Datasets*

Description

This function returns information about available CES datasets that can be accessed through the package.

Usage

```
list_ces_datasets(details = FALSE)
```

Arguments

`details`	Logical indicating whether to return detailed information about each dataset. Default is FALSE.

Value

If details is FALSE, a character vector of available dataset years. If TRUE, a tibble with columns for year, type, and description.

Examples

```
# Get list of available years
list_ces_datasets()

# Get detailed information
list_ces_datasets(details = TRUE)
```

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