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 multiple sources including the 'Borealis' Data repository <https://borealisdata.ca/> and the official 'Canadian Election Study' website <https://ces-eec.arts.ubc.ca/>. This package is not officially affiliated with the Canadian Election Study, 'Borealis' Data, or the University of British Columbia, and users should cite the original data sources in their work.

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

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`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 Sources

Data is accessed from multiple sources including the Borealis Data repository (the primary institutional repository for most CES datasets) and the official Canadian Election Study website. This package is not officially affiliated with the Canadian Election Study, Borealis Data, or the University of British Columbia, and users should cite the original data sources in their work.

Author(s)

Laurence-Olivier M. Foisy

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>_<variant>.<format>, where the format extension corresponds to the original dataset format (e.g., .sav for SPSS, .dta for Stata). For ZIP archives, only the data files are extracted and saved, with all other files (PDFs, etc.) discarded.

Usage

```
download_all_ces_datasets(
  path = NULL,
  years = NULL,
  variants = 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.
variants	Optional character vector specifying which variants to download. If NULL (default), all available variants 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(), overwrite = TRUE)

# Download only specific years (all variants for those years)
download_all_ces_datasets(years = c("2015", "2019", "2021"), path = tempdir(), overwrite = TRUE)

# Download only web surveys for 2015 and 2019
download_all_ces_datasets(years = c("2015", "2019"), variants = "web",
                          path = tempdir(), overwrite = TRUE)

# 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>_<variant>.<format>, where the format extension corresponds to the original dataset format (e.g., .sav for SPSS, .dta for Stata).

Usage

```
download_ces_dataset(
  year,
  variant = NULL,
  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", "1972", "1974", "1984", "1988", "1993", "1997", "2000", "2004", "2006", "2008", "2011", "2015", "2019", "2021".
variant	A character string indicating the survey variant to download. Options depend on the year: "single_survey" (default for most years), "web" (default for 2015, 2019), "phone", "combo", "1974_1980", "jnjl", "sep", "nov". Use list_ces_datasets to see available variants for each year.
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 web survey dataset to a temporary directory
download_ces_dataset("2019", path = tempdir(), overwrite = TRUE)

# Download the 2019 phone survey to a specific directory
download_ces_dataset("2019", variant = "phone", path = tempdir(), overwrite = TRUE)

# Download 1972 September survey
download_ces_dataset("1972", variant = "sep", path = tempdir(), overwrite = TRUE)

# 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,
  variant = NULL,
  path = NULL,
  overwrite = FALSE,
  verbose = TRUE
)
```

Arguments

year	A character string indicating the year of the CES data. Available years include "1965", "1968", "1972", "1974", "1984", "1988", "1993", "1997", "2000", "2004", "2006", "2008", "2011", "2015", "2019", "2021".

variant	A character string indicating the survey variant to download. For years with multiple variants (1972, 2015, 2019), this specifies which one to use. If NULL (default), uses the first available variant for the year.
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 (defaults to web variant)
download_pdf_codebook("2019", path = tempdir(), overwrite = TRUE)

# Download the 2019 phone survey codebook
download_pdf_codebook("2019", variant = "phone", path = tempdir(), overwrite = TRUE)

# Download the 1972 September survey codebook
download_pdf_codebook("1972", variant = "sep", path = tempdir(), overwrite = TRUE)

# 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

```
# 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")
```

---

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,
  variant = NULL,
  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", "1972", "1974", "1984", "1988", "1993", "1997", "2000", "2004", "2006", "2008", "2011", "2015", "2019", "2021".
variant	A character string indicating the survey variant to download. Options depend on the year: "single_survey" (default for most years), "web" (default for 2015, 2019), "phone", "combo", "1974_1980", "jnjl", "sep", "nov". Use `list_ces_datasets` to see available variants for each year.
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 web survey data (default)
ces_2019_web <- get_ces("2019")

# Get the 2019 CES phone survey data
ces_2019_phone <- get_ces("2019", variant = "phone")

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

# Get 1972 September survey
ces_1972_sep <- get_ces("1972", variant = "sep")

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

---

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,
  variant = NULL,
  variables = NULL,
  regex = FALSE,
  format = "tibble",
  clean = TRUE,
  use_cache = TRUE
)
```

Arguments

year	A character string indicating the year of the CES data.
variant	A character string indicating the survey variant to download. Options depend on the year: "single_survey" (default for most years), "web" (default for 2015, 2019), "phone", "combo", "1974_1980", "jnjl", "sep", "nov". Use `list_ces_datasets` to see available variants for each year.
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 web survey
variables <- c("vote_choice", "age", "gender", "province", "education")
ces_subset <- get_ces_subset("2019", variables = variables)

# Get subset from 2019 phone survey
ces_subset_phone <- get_ces_subset("2019", variant = "phone", variables = variables)

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

---

list_ces_datasets *List Available Canadian Election Study Datasets*

Description

This function displays a formatted catalog of all available CES datasets that can be accessed through the package, showing year and available variants. One row per year with variants listed as comma-separated values.

Usage

```
list_ces_datasets()
```

Value

Invisibly returns a tibble with columns for year and variants. The catalog is printed to the console for easy viewing.

Examples

```
# Display catalog of all available datasets by year
list_ces_datasets()
```

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