

# Package ‘ICON’

August 29, 2020

**Type** Package

**Title** Provides Easy Access to Complex Systems Datasets

**Version** 0.3.0

**Description** Provides easy-to-use and easy-to-access datasets from the Index of COmplex Networks (ICON) database available on the University of Colorado website. All datasets can be loaded with a single function call and new datasets are being slowly added from ICON at <<https://icon.colorado.edu>>. Specific ICON datasets of interest can be requested at the BugReports URL <<https://github.com/rrrlw/ICON/issues>>.

**Depends** R (>= 2.10)

**Imports** utils (>= 3.6.1)

**License** CC0

**Encoding** UTF-8

**LazyData** true

**URL** <https://github.com/rrrlw/ICON>

**BugReports** <https://github.com/rrrlw/ICON/issues>

**RoxygenNote** 7.1.0

**NeedsCompilation** no

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**Repository** CRAN

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## R topics documented:

get_data . . . . .	2
ICON . . . . .	2
ICON_data . . . . .	3

Index	4
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get\_data

*Download and Load Complex Network Datasets*


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### Description

Downloads the binary complex network dataset (rda format), then loads the dataset into the R environment, and deletes the downloaded file from the user's file system.

### Usage

```
get_data(dataset_name, destdir = ".")
```

### Arguments

dataset_name	dataset variable name (corresponds to var_name in ICON_data)
destdir	location to temporarily download binary file

### Examples

```
## Not run:
# load single dataset
get_data("chess")

# load multiple datasets
get_data(c("karate_club", "word_adj"))

# fail to load dataset not in the ICON R package
get_data("not_a_dataset")

## End(Not run)
```

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ICON

*ICON: Provides Easy Access to Complex Systems Datasets*


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### Description

Provides easy-to-use and easy-to-access datasets from the Index of COMplex Networks (ICON) database available on the University of Colorado website. All datasets can be loaded with a single function call and new datasets are being slowly added from ICON.

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ICON\_data*Details about ICON datasets*

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**Description**

Data frame containing relevant details of each network dataset included in the ICON R package.

**Usage**

ICON\_data

**Format**

A data frame with 10 columns and 22 rows:

**Var\_name** character; variable name to access dataset in R

**Edges** integer; number of edges in network

**Directed** logical; 0 if undirected network, 1 if directed

**Weighted** logical; 0 if unweighted network, 1 if weighted

**Name** character; network title

**Year** integer; year network was published/released

**Source** character; usually URL to access raw network data

**Description** character; short description of network

**Citation** character; how to cite network if used

**Details**

Citation: Aaron Clauset, Ellen Tucker, and Matthias Sainz, "The Colorado Index of Complex Networks." <https://icon.colorado.edu/> (2016).

Raoul R. Wadhwa and Jacob G. Scott, "ICON" R package. <https://cran.r-project.org/package=ICON> (2019).

**Source**

<https://icon.colorado.edu>

# Index

## \* **datasets**

ICON\_data, [3](#)

get\_data, [2](#)

ICON, [2](#)

ICON\_data, [3](#)