

Package ‘IalsaSynthesis’

October 1, 2015

Title Synthesizing Information Across Collaborating Research

Description Synthesizes information across collaborating research. Created specifically for Integrative Analysis of Longitudinal Studies of Aging (IALSA).

Version 0.1.8

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Author Will Beasley [aut, cre],
Andrey Koval [aut],
Integrative Analysis of Longitudinal Studies of Aging (IALSA) [cph]

Maintainer Will Beasley <wibeasley@hotmail.com>

URL <https://github.com/IALSA/IalsaSynthesis>, <http://www.ialsa.org/>

BugReports <https://github.com/IALSA/IalsaSynthesis/issues>

Depends R(>= 3.0.0),
stats

Imports testit

Suggests devtools,
knitr,
readr,
testthat (>= 0.9)

License GPL-2

LazyData TRUE

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IalsaSynthesis-package

Synthesizing Information Across Collaborating Research

Description

Synthesizing information across collaborating research. Created for **Integrative Analysis of Longitudinal Studies of Aging** (IALSA).

Note

The release version will be available through **CRAN**. The most recent development version is available through **GitHub**. Please see the installation examples below.

If you're having trouble with the package, please install the development version. If this doesn't solve your problem, please create a **new issue**, or email Will or Andrey.

Author(s)

William Howard Beasley –Assistant Professor of Research, **University of Oklahoma Health Sciences Center**, **Dept of Pediatrics**, Biomedical and Behavioral Methodology Core (**BBMC**)

Andrey Koval –Post Doc, **University of Victoria**, **Department of Psychology**

References

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Examples

```
## Not run:
# Install/update IalsaSynthesis with the release version from CRAN.
install.packages('IalsaSynthesis')

# Install/update IalsaSynthesis with the development version from GitHub
#install.packages('devtools') #Uncomment if `devtools` isn't installed already.
devtools::install_github('IALSA/IalsaSynthesis')

## End(Not run)
```

extract	<i>Extract the values within model output files.</i>
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Description

Functions that extract the values within model output files.

Usage

```
extract_scalar_string(regex, source)

extract_scalar_float(regex, source)

extract_named_wald(parameter_name, mplus_output)

extract_output_filename(mplus_output,
  regex = "\\bDATA:\\s+File = (.+);.*")

extract_free_parameter_count(mplus_output,
  regex = "\\bNumber of Free Parameters\\s+(\\d{1,})\\b")

extract_loglikelihood(mplus_output,
  regex = "\\bLoglikelihood\\s+H0 Value\\s+([-\\d\\.]+)\\b")

extract_scaling_correction(mplus_output,
  regex = "\\bH0 Scaling Correction Factor\\s+([-\\d\\.]+)\\s+for MLR\\b")

extract_aic(mplus_output,
  regex = "\\bAkaike \\(AIC\\)\\s+([-\\d\\.]+)\\b")

extract_bic(mplus_output,
  regex = "\\bBayesian \\(BIC\\)\\s+([-\\d\\.]+)\\b")

extract_bic_adjusted(mplus_output,
  regex = "\\bSample-Size Adjusted BIC\\s+([-\\d\\.]+)\\b")
```

Arguments

regex	Regular Expression pattern to capture and extract contents.
source	Text to run the regex against.
parameter_name	Variable name in Mplus output to extract.
mplus_output	Text containing model output. This should be the text read from the file (not a file path).

Value

A numeric value corresponding to the desired quantity.

Functions

- `extract_scalar_float`: Generalizable function to return a single numeric value.
- `extract_named_wald`: Determine the estimate, standard error, z-score, and two-tailed p-value of an estimate (ie, the results of a Wald test).
- `extract_output_filename`: Determine the path of the Mplus output file.
- `extract_free_parameter_count`: Determine the number of free parameters for the model estimation.
- `extract_loglikelihood`: Determine the log likelihood for the model estimation.
- `extract_scaling_correction`: Determine the H0 Scaling Correction Factor for the model estimation.
- `extract_aic`: Determine the AIC for the model estimation.
- `extract_bic`: Determine the BIC for the model estimation.
- `extract_bic_adjusted`: Determine the Sample-Size Adjusted BIC for the model estimation.

Author(s)

Will Beasley

Examples

```
library(IalsaSynthesis) #Load the package into the current R session.
```

validate

Functions that check the validity of values throughout the workflow.

Description

These functions help identify mistakes in formatting before the create difficult-to-diagnose problems later.

Usage

```
validate_filename_output(filename, path, file_extension_expected = "out",
  underscore_count_expected = 4L)
```

Arguments

<code>filename</code>	The name of the file to be validated.
<code>path</code>	The location of the file to be validated.
<code>file_extension_expected</code>	The extension of the file. This defaults to "out", which corresponds to Mplus output.
<code>underscore_count_expected</code>	The number of underscores required in the name (not currently used).

Value

An invisible TRUE value if the filename is valid. Otherwise, an error is thrown.

Author(s)

Will Beasley

Examples

```
library(IalsaSynthesis) #Load the package into the current R session.
## Not run:
path <- "./studies/eas"
good_name <- "u1_male_aehplus_muscle_noCog_hand_noCogSpec.out"
validate_filename_output(good_name, path)

bad_name <- "missing_something.outtttt"
validate_filename_output(bad_name, path)

## End(Not run)
```

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