

Package ‘FAfA’

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Title Factor Analysis for All

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Description Provides a comprehensive Shiny-based graphical user interface for conducting a wide range of factor analysis procedures. 'FAfA' (Factor Analysis for All) guides users through data uploading, assumption checking (descriptives, collinearity, multivariate normality, outliers), data wrangling (variable exclusion, data splitting), factor retention analysis (e.g., Parallel Analysis, Hull method, EGA), Exploratory Factor Analysis (EFA) with various rotation and extraction methods, Confirmatory Factor Analysis (CFA) for model testing, Reliability Analysis (e.g., Cronbach's Alpha, McDonald's Omega), Measurement Invariance testing across groups, and item weighting techniques. The application leverages established R packages such as 'lavaan' and 'psych' to perform these analyses, offering an accessible platform for researchers and students. Results are presented in user-friendly tables and plots, with options for downloading outputs.

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URL <https://github.com/AFarukKILIC/FAfA>

BugReports <https://github.com/AFarukKILIC/FAfA/issues>

Imports Amelia, EFA.MRFA, EFA.dimensions, EFAtools, EGAnet, ItemRest, MBESS, bsicons, bslib, config, dplyr, energy, ggcorrplot, ggplot2, golem, grDevices, graphics, haven, lavaan, magrittr, mctest, mice, missForest, moments, mvnrmalTest, naniar, pastecs, psych, psychometric, readxl, semPlot, semTools, shiny, shinycssloaders, sirt, stats, tools, utils

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Author Abdullah Faruk KILIC [aut, cre],
Ahmet Caliskan [aut]
Maintainer Abdullah Faruk KILIC <afarukkilic@trakya.edu.tr>
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about_server	<i>About Server Module</i>
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Description

About Server Module

Usage

about_server(id)

Arguments

id Module namespace ID.

assumptions_server	<i>Assumptions Server Logic (Modern)</i>
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Description

Assumptions Server Logic (Modern)

Usage

assumptions_server(id, data)

Arguments

id	Module namespace ID.
data	Input data (reactive).

cfa_server	<i>Confirmatory Factor Analysis (CFA) Server Module</i>
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Description

Confirmatory Factor Analysis (CFA) Server Module

Usage

cfa_server(id, data)

Arguments

id	Module namespace ID.
data	Reactive containing the input dataset.

cfa_ui	<i>Confirmatory Factor Analysis (CFA) UI Module</i>
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Description

Confirmatory Factor Analysis (CFA) UI Module

Usage

cfa_ui(id)

Arguments

id	Module namespace ID.
----	----------------------

data_selection_server	<i>Data Selection Server Logic (Modern)</i>
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Description

Data Selection Server Logic (Modern)

Usage

data_selection_server(id, data)

Arguments

id	Module namespace ID.
data	Input data (reactive).

efa_server_analysis	<i>EFA Analysis Server Module</i>
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Description

EFA Analysis Server Module

Usage

efa_server_analysis(id, data)

Arguments

id	Module namespace ID.
data	Input data (reactive).

efa_server_fac_ret	<i>EFA Factor Retention Server Module</i>
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Description

EFA Factor Retention Server Module

Usage

efa_server_fac_ret(id, data)

Arguments

id	Module namespace ID.
data	Input data (reactive).

efa_server_report	<i>EFA Reporting Server Module</i>
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Description

EFA Reporting Server Module

Usage

efa_server_report(id, data, efa_output_reactive, efa_settings_reactive)

Arguments

- id Module namespace ID.
- data Input data (reactive).
- efa_output_reactive Reactive containing the EFA results.
- efa_settings_reactive Reactive containing the EFA settings.

inv_server	<i>Measurement Invariance Server Module</i>
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Description

Measurement Invariance Server Module

Usage

inv_server(id, data)

Arguments

- id Module namespace ID.
- data Input data (reactive)

item_weighting_server *Item Weighting Server Module*

Description

Item Weighting Server Module

Usage

```
item_weighting_server(id, data)
```

Arguments

id	Module namespace ID.
data	Input data (reactive)

mod_itemrest_server *ItemRest Analysis Server Module*

Description

ItemRest Analysis Server Module

Usage

```
mod_itemrest_server(id, data)
```

Arguments

id	Module namespace ID.
data	Reactive containing the input dataset.

mod_itemrest_ui *ItemRest Analysis UI Module*

Description

ItemRest Analysis UI Module

Usage

```
mod_itemrest_ui(id)
```

Arguments

id	Module namespace ID.
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mod_missing_server	<i>Missing Value Handling Server Module</i>
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Description

Missing Value Handling Server Module

Usage

```
mod_missing_server(id, data)
```

Arguments

id	Module namespace ID.
data	Reactive containing the input dataset.

Value

Reactive containing the processed (imputed) dataset.

mod_missing_ui	<i>Missing Value Handling UI Module</i>
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Description

Missing Value Handling UI Module

Usage

```
mod_missing_ui(id)
```

Arguments

id	Module namespace ID.
----	----------------------

op_null_or	<i>Default Value Operator</i>
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Description

Helper for default NULL values (coalesce)

Usage

```
x %||% y
```

Arguments

x	Left hand side
y	Right hand side

reliability_server	<i>Reliability Analysis Server Module</i>
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Description

Reliability Analysis Server Module

Usage

```
reliability_server(id, data)
```

Arguments

id	Module namespace ID.
data	Input data (reactive)

run_app	<i>Run the Shiny Application</i>
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Description

This function launches the Shiny application. It uses default options for shinyApp and golem.

Usage

```
run_app()
```

wrangling_server_ex_var
<i>Wrangling Server Modules (Modern)</i>

Description

Wrangling Server Modules (Modern)

Usage

wrangling_server_ex_var(id, data)

Arguments

- | | |
|------|-----------------------|
| id | Module namespace ID. |
| data | Input data (reactive) |

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