

# Package: FAFa (via r-universe)

June 3, 2026

**Title** Factor Analysis for All

**Version** 0.5

**Date** 2025-12-12

**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, utils

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**RoxygenNote** 7.3.3

**Config/pak/sysreqs** cmake libglpk-dev make libgs10-dev libicu-dev libjpeg-dev libpng-dev libuv1-dev libxml2-dev libssl-dev libx11-dev zlib1g-dev

**Repository** https://afarukkilic.r-universe.dev

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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     *Assumptions Server Logic (Modern)*

---

**Description**

Assumptions Server Logic (Modern)

**Usage**

```
assumptions_server(id, data)
```

**Arguments**

id                    Module namespace ID.

data                  Input data (reactive).

---

cfa\_server             *Confirmatory Factor Analysis (CFA) Server Module*

---

**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                      *Confirmatory Factor Analysis (CFA) UI Module*

---

**Description**

Confirmatory Factor Analysis (CFA) UI Module

**Usage**

```
cfa_ui(id)
```

**Arguments**

id                      Module namespace ID.

---

data\_selection\_server    *Data Selection Server Logic (Modern)*

---

**Description**

Data Selection Server Logic (Modern)

**Usage**

```
data_selection_server(id, data)
```

**Arguments**

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

---

efa\_server\_analysis    *EFA Analysis Server Module*

---

**Description**

EFA Analysis Server Module

**Usage**

```
efa_server_analysis(id, data)
```

**Arguments**

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

---

efa\_server\_fac\_ret      *EFA Factor Retention Server Module*

---

**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      *EFA Reporting Server Module*

---

**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                      *Measurement Invariance Server Module*

---

**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.

---

mod\_missing\_server      *Missing Value Handling Server Module*

---

**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`*Run the Shiny Application*

---

**Description**

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

**Usage**

```
run_app()
```

---

`wrangling_server_ex_var`*Wrangling Server Modules (Modern)*

---

**Description**

Wrangling Server Modules (Modern)

**Usage**

```
wrangling_server_ex_var(id, data)
```

**Arguments**

<code>id</code>	Module namespace ID.
<code>data</code>	Input data (reactive)

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