

# Package ‘projectLSA’

January 30, 2026

**Title** Shiny Application for Latent Structure Analysis with a Graphical User Interface

**Version** 0.0.7

**Description** Provides an interactive Shiny-based toolkit for conducting latent structure analyses, including Latent Profile Analysis (LPA), Latent Class Analysis (LCA), Latent Trait Analysis (LTA/IRT), Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modeling (SEM). The implementation is grounded in established methodological frameworks: LPA is supported through 'tidyLPA' (Rosenberg et al., 2018) <doi:10.21105/joss.00978>, LCA through 'poLCA' (Linzer & Lewis, 2011) <doi:10.32614/CRAN.package>, SEM and CFA functionalities build upon the 'lavaan' framework (Rosseel, 2012) <doi:10.18637/jss.v048.i02>. Users can upload datasets or use built-in examples, fit models, compare fit indices, visualize results, and export outputs without programming.

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**Depends** R (>= 4.0.0)

**Encoding** UTF-8

**Imports** colourpicker, data.table, dplyr, DT, ggiraph, ggplot2, glca, haven, lavaan, mclust, mirt, plotly, poLCA, psych, purrr, readr, readxl, rlang, semPlot, semptools, semTools, shiny, shinyWidgets, stats, stringr, tibble, tidyr, tidyLPA, tidyverse, viridisLite

**Suggests** knitr, pkgdown, rmarkdown

**RoxygenNote** 7.3.3

**VignetteBuilder** knitr

**URL** <https://github.com/hdmeasure/projectLSA>

**BugReports** <https://github.com/hdmeasure/projectLSA/issues>

**NeedsCompilation** no

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|                |                                                |
|----------------|------------------------------------------------|
| run_projectLSA | <i>Launch the projectLSA Shiny Application</i> |
|----------------|------------------------------------------------|

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**Description**

This function starts the Shiny app included in the projectLSA package.

**Usage**

```
run_projectLSA()
```

**Value**

Launches a Shiny application (no return value)

**Examples**

```
if (interactive()) {  
  projectLSA::run_projectLSA()  
}
```

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