

Package: kitverse (via r-universe)

October 31, 2026

Title Install and Load the KIT Research Tools in One Step

Version 0.4.3

Date 2026-11-01

Description One package that installs the KIT research tools and everything they need: 'kits' (item calibration, linking and scoring), the 'shiny' apps 'kitsUI' and 'kitJoin', and the shared interface package 'kitDesign'. It checks the computer (R version, package library, package versions, and whether each app really starts) and updates packages that are missing or too old. Like 'tidyverse', library(kitverse) attaches the core packages and lists their versions and conflicts; the apps are then started with their own run_kitsui() and run_kitjoin(). Loading the 'kitverse' namespace loads none of the other packages, so the check and the update still work when a package is broken.

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URL <https://github.com/jiewenTsai/kitverse>,
<https://jiewentsai.r-universe.dev>

BugReports <https://github.com/jiewenTsai/kitverse/issues>

Encoding UTF-8

Depends R (>= 4.1.0)

Imports bslib (>= 0.11.0), cli, httpuv, kitDesign (>= 0.6.1), kitJoin (>= 0.7.4), kits (>= 0.25.2), kitsUI (>= 0.8.2), rmarkdown, shiny, tools, utils

Suggests testthat (>= 3.0.0)

Remotes jiewenTsai/kits, jiewenTsai/kitDesign@v0.6.1,
jiewenTsai/kitsUI, jiewenTsai/kitJoin

Additional_repositories <https://jiewentsai.r-universe.dev>

Config/testthat/edition 3

Roxygen list(markdown = TRUE)

Config/roxygen2/version 8.1.0
Config/pak/sysreqs cmake make libicu-dev libuv1-dev libssl-dev libx11-dev zlib1g-dev
Repository <https://jiewentsai.r-universe.dev>
Date/Publication 2026-10-31 23:10:19 UTC
RemoteUrl <https://github.com/jiewenTsai/kitverse>
RemoteRef HEAD
RemoteSha beea02b52b2bb362a1d5827331cc688839d5a880

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kitverse_check	<i>Check whether this computer can run the KIT tools</i>
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Description

One line per item: the R version, whether the package library is writable, whether every package is installed and new enough, whether the packages load, the Linux system libraries, the temporary folder, and the internet connection used for fonts. Finally it really starts kitsUI and kitJoin (in a separate R, without a browser) and checks that each page comes back. Ask workshop participants to run it once beforehand and send a screenshot.

Usage

```
kitverse_check(apps = TRUE, timeout = 120)
```

Arguments

- apps TRUE to really start the apps (about 5–30 seconds each).
- timeout How many seconds to wait for each app.

Value

A data frame (invisibly): item, status ("ok", "fail", "note"), detail.

Examples

```
if (interactive()) kitverse_check()
```

kitverse_conflicts	<i>Conflicts between the core packages and other attached packages</i>
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Description

Lists functions in the core packages (kits, kitsUI, kitJoin, kitDesign) that have the same name as a function in another attached package: which one wins and which ones are masked. Writing the prefix (kits::) always gets that package's version. `library(kitverse)` prints this, like `tidyverse_conflicts()`.

Usage

```
kitverse_conflicts(only = kv_core())
```

Arguments

`only` Only these core packages (default: all of them that are attached).

Value

A data frame that prints one line per conflict: name, winner (the package in use), losers (the masked packages).

Examples

```
kitverse_conflicts()
```

kitverse_pandoc	<i>Install pandoc if R cannot find one</i>
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Description

Saving a plot as one html file (the plot downloads in kitsUI) needs pandoc. RStudio and Quarto come with it; a computer with only R has none. When R cannot find pandoc, this downloads it (about 20–40 MB) into kitverse's data folder and adds RSTUDIO_PANDOC to the user's ~/.Renvirom, so every new R session finds it. [kitverse_update\(\)](#) calls this.

Usage

```
kitverse_pandoc(force = FALSE)
```

Arguments

`force` TRUE to install even when R already finds pandoc.

Details

`options(kitverse.pandoc_url = )` replaces the download folder (for example an offline copy at the workshop); it must hold the same file names as the pandoc GitHub release.

Value

The folder that holds pandoc (invisibly), or NULL when nothing could be installed.

Examples

```
if (interactive()) kitverse_pandoc()
```

kitverse_repos	<i>The repositories packages are installed from</i>
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Description

The KIT packages come from r-universe (<https://jiewentsai.r-universe.dev>), everything else from CRAN; on Ubuntu and Debian, CRAN is replaced by Posit Package Manager's pre-built packages. `options(kitverse.repo = )` replaces r-universe (for example with an offline repository at the workshop), and `options(kitverse.cran = )` replaces CRAN.

Usage

```
kitverse_repos()
```

Value

A named vector of URLs, ready for `install.packages(repos = )`.

Examples

```
kitverse_repos()
```

kitverse_requirements	<i>All packages kitverse needs</i>
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Description

Starting from roots (kitverse itself by default), reads the DESCRIPTION of the installed packages and finds every package needed directly or indirectly, the minimum version required, and the installed version. A package that is not installed has no DESCRIPTION to read, so the packages below it show up only after it is installed (`kitverse_update()` repeats until nothing is missing).

Usage

```
kitverse_requirements(roots = "kitverse", lib.loc = NULL)
```

Arguments

<code>roots</code>	The packages to start from.
<code>lib.loc</code>	Package libraries (default <code>.libPaths()</code>).

Value

A data frame: `pkg`, `min` (minimum version, NA when none), `have` (installed version, NA when not installed), `ok` (installed and new enough), `why` (the reason when not ok).

Examples

```
req <- kitverse_requirements()
req[!req$ok, ]
```

<code>kitverse_update</code>	<i>Install missing packages and update packages that are too old</i>
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Description

Finds the packages kitverse needs that are not installed or older than required (`kitverse_requirements()`) and installs them from `kitverse_repos()`. A newly installed package may need further packages, so this repeats until nothing is missing (at most rounds times). The installation runs in a separate R process, so it does not matter what the current R session has loaded.

Usage

```
kitverse_update(all = FALSE, rounds = 4, quiet = FALSE)
```

Arguments

<code>all</code>	TRUE to also update packages that have a newer version in the repositories (not only those that are too old).
<code>rounds</code>	At most how many rounds.
<code>quiet</code>	TRUE to hide the installation output.

Details

A freshly installed R has no personal package library yet; this creates it first (`R_LIBS_USER`).

Value

The packages installed or updated (invisibly).

Examples

```
if (interactive()) kitverse_update()
```

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