

Package ‘psychds’

October 15, 2026

Title Creating and Validating 'Psych-DS' Datasets

Version 0.1.0

Description Provides a 'Shiny' application and helper functions for adopting 'Psych-DS' (<<https://psych-ds.github.io/>>), a community data standard for organizing and documenting datasets in the psychological and behavioral sciences inspired by the Brain Imaging Data Structure ('BIDS'). A guided interface walks researchers through the dataset creation process, organizing tabular data files into proper 'Psych-DS' directory structures, generating new, compliant, keyword-based filenames, and generating machine-readable 'JSON' metadata. Additional tools support building and editing data dictionaries with variable-level descriptions, validating datasets against the full 'Psych-DS' specification via a bundled 'JavaScript' validator, and exploring dataset contents interactively.

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URL <https://psych-ds.github.io/psychds-r/>,
<https://github.com/psych-ds/psychds-r>

BugReports <https://github.com/psych-ds/psychds-r/issues>

Copyright see file inst/COPYRIGHTS for bundled 'JavaScript' library
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Encoding UTF-8

RoxygenNote 7.3.3

Depends R (>= 4.1.0)

Imports cli, jsonlite, rstudioapi, shiny (>= 1.7.0), tools, utils

Suggests crosstalk, DT, fs, knitr, miniUI, pointblank, rmarkdown,
shinydashboard, shinyjs, sortable, spelling, testthat (>= 3.0.0), zip

Config/testthat/edition 3

SystemRequirements Node.js (>= 18.0.0)

VignetteBuilder knitr

Language en-US

NeedsCompilation no

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Repository CRAN

Date/Publication 2026-10-15 17:30:07 UTC

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check_dependencies	<i>Check and Load Package Dependencies</i>
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Description

This function provides robust package management following CRAN policies. It checks versions, handles conflicts, and provides clear user feedback.

Usage

```
check_dependencies(  
  min_versions = NULL,  
  recommended_versions = NULL,  
  startup_mode = getOption("psychds.startup_mode", "recommended")  
)
```

Arguments

min_versions Named list of minimum required package versions
recommended_versions Named list of recommended package versions
startup_mode Character: "strict", "recommended", or "minimal"

Value

Logical indicating success

check_psychds_deps	<i>Check psychds Dependencies</i>
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Description

Verifies that all required and optional package dependencies are installed and meet minimum version requirements.

Usage

```
check_psychds_deps(  
  install_missing = interactive(),  
  detailed = FALSE,  
  check_pdf = TRUE  
)
```

Arguments

install_missing	Logical. If TRUE (and session is interactive), prompts the user to install any missing packages. Defaults to <code>interactive()</code> .
detailed	Logical. If TRUE, displays additional information about the R environment. Default is FALSE.
check_pdf	Logical. Ignored. Retained for backwards compatibility. Default is TRUE.

Details

This function checks for:

- Required packages: shiny, shinydashboard, shinyjs, DT, jsonlite
- Optional packages: sortable, zip, pointblank
- Minimum version requirements for each package

If dependencies are missing, the function provides installation instructions.

Value

Invisibly returns a list with `missing_required` and `missing_recommended` character vectors.

Examples

```
# Quick check  
check_psychds_deps()  
  
# Detailed check with environment info  
check_psychds_deps(detailed = TRUE)
```

run_app_safe

Initialize Shiny App with Robust Package Management

Description

Main entry point that ensures all dependencies are met

Usage

```
run_app_safe(app_dir = system.file("shiny", package = "psychds"), ...)
```

Arguments

app_dir	Directory containing the Shiny app
...	Additional arguments passed to shiny::runApp

Value

No return value. Called for its side effect of launching the 'Shiny' application; blocks until the app is closed.

run_psych_ds_app

Run the Psych-DS Shiny Application

Description

Launches the interactive Shiny application for creating, editing, and validating Psych-DS compliant datasets.

Usage

```
run_psych_ds_app(
  launch.browser = getOption("shiny.launch.browser", interactive()),
  port = getOption("shiny.port"),
  host = getOption("shiny.host", "127.0.0.1"),
  startup_mode = getOption("psychds.startup_mode", "recommended"),
  force_browser = getOption("psychds.force_browser", FALSE),
  ...
)
```

Arguments

launch.browser	Logical or function. Should the app be opened in a browser? Defaults to TRUE in interactive sessions.
port	Integer. Port number for the application. If NULL, a random available port is used.
host	Character. Host IP address. Defaults to "127.0.0.1" (localhost).
startup_mode	Character. One of "strict", "recommended", or "minimal". Controls dependency checking strictness: • "strict": Requires all packages at minimum versions • "recommended": Warns about outdated packages but continues • "minimal": Only checks for critical dependencies
force_browser	Logical. Force opening in external browser. Recommended for RStudio users experiencing viewer issues.
...	Additional arguments passed to <code>shiny::runApp()</code> .

Details

The application provides a guided interface for:

- Selecting project directories and data files
- Adding dataset metadata
- Standardizing filenames with Psych-DS keywords
- Generating data dictionaries
- Validating datasets against the Psych-DS specification

Value

This function does not return a value. It launches the Shiny application and blocks until the app is closed.

See Also

[check_psychds_deps\(\)](#) for verifying dependencies before running.

Examples

```
if (interactive()) {
  # Standard launch
  run_psych_ds_app()

  # Force external browser (if RStudio viewer has issues)
  run_psych_ds_app(force_browser = TRUE)

  # Minimal checking for faster startup
  run_psych_ds_app(startup_mode = "minimal")

  # Specific port
```

```

    run_psych_ds_app(port = 3838)
}

```

validate_dataset	<i>Validate a Psych-DS Dataset</i>
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Description

Validates a dataset directory against the full 'Psych-DS' specification using the same validator used by the 'psychds-validator' command-line tool.

Usage

```
validate_dataset(dir_path, json = FALSE, verbose = FALSE, use_events = FALSE)
```

Arguments

dir_path	Path to the 'Psych-DS' dataset directory to validate.
json	Logical. If TRUE, output results as JSON instead of formatted text. Default is FALSE.
verbose	Logical. If TRUE, show verbose output including warnings. Default is FALSE.
use_events	Logical. If TRUE, show live checklist progress output. Default is FALSE.

Details

Requires 'Node.js' to be installed and available on the system PATH. Install 'Node.js' from <https://nodejs.org>.

Value

Invisibly returns the exit status. Called for its side effect of printing validation results to the console.

Examples

```

## Not run:
# Standard text output
validate_dataset("path/to/my-study")

# JSON output for programmatic use
validate_dataset("path/to/my-study", json = TRUE)

# Verbose with warnings
validate_dataset("path/to/my-study", verbose = TRUE)

# Live checklist
validate_dataset("path/to/my-study", use_events = TRUE)

## End(Not run)

```

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