Package: psychds (via r-universe)

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 copyrights and licenses

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

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`check_dependencies` *Check and Load Package Dependencies*

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 *Check psychds Dependencies*

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 `interactive()`.
`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 `shiny::runApp()`.

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` *Validate a Psych-DS Dataset*

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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