Package 'structenforcement'

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Title Struct-Like Data Type Checking and Enforcement

Version 0.2.0

Description Enforcement of field types in lists. A drop-in tool to allow for dynamic input data that might be questionably parsed or cast to be coerced into the specific desired format in a reasonably performant manner.

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Encoding UTF-8

RoxygenNote 7.3.3

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

Imports dplyr, lubridate, rlang

NeedsCompilation yes

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bind_as_struct *Bind as Struct*

Description

Given a set of lists/dataframes, attempt to join them as a dataframe with field types matching the specified template. The default and fastest approach simply relies on `dplyr::bind_rows` to use all fields present in the lists to be joined, while strict mode ensures that the template fields and only the template fields are present.

Usage

```
bind_as_struct(template, ..., .list = NULL, strict = FALSE)
```

Arguments

`template`	A named list to use as a template.
`...`	The lists to join
`.list`	A pre-built list of frames to join, as an alternative to `...`. Use exactly one of `...` or `.list`.
`strict`	Use all and only the fields in the template. Default: FALSE

Value

A dataframe containing the combined inputs.

Examples

```
bind_as_struct(list("a" = character(0)), list("a" = 1), list("a" = "a"))
```

type_check *List Type Checking*

Description

Given two named objects, go through both and make the types of the second match the types of the first.

Usage

```
type_check(
  template,
  target,
  with_cast = FALSE,
  log_items = c("casts", "missing", "excess", "debug")[c(1, 3)]
)
```

Arguments

`template`	• A named list to use as a template.
`target`	• A named list to use as the output.
`with_cast`	• If true, edits the target instead of just checking types.
`log_items`	• Which debug info to print. Takes a character vector. By default, logs casts and excess fields (target fields not in template). We expect some missing for the moment.

Value

The target object, with its types appropriately cast.

Examples

```
type_check(
  list("a" = character(0), "b" = integer(0)),
  data.frame("a" = c(1,2), "b" = c(3,4)),
  TRUE, NULL
)
```

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