

# Package ‘fr’

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**Title** Frictionless Standards

**Version** 0.5.2

**Description** A ``tabular-data-resource" (<<https://specs.frictionlessdata.io/tabular-data-resource/>>) is a simple format to describe a singular tabular data resource such as a CSV file. It includes support both for metadata such as author and title and a schema to describe the data, for example the types of the fields/columns in the data. Create a tabular-data-resource by providing a data.frame and specifying metadata. Write and read tabular-data-resources to and from disk.

**License** MIT + file LICENSE

**Encoding** UTF-8

**RoxygenNote** 7.3.2

**Imports** cli, purrr, vroom, S7 (>= 0.1.1), tibble, tidyselect, yaml, dplyr, rlang

**Suggests** testthat (>= 3.0.0), withr, fs, knitr, rmarkdown, curl

**Config/testthat/edition** 3

**Config/testthat/parallel** true

**URL** <https://github.com/cole-brokamp/fr>,  
<https://cole-brokamp.github.io/fr/>

**BugReports** <https://github.com/cole-brokamp/fr/issues>

**VignetteBuilder** knitr

**NeedsCompilation** no

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**Repository** CRAN

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## Contents

as_data_frame . . . . .	2
as_fr_field . . . . .	3
as_fr_tdr . . . . .	4
as_list . . . . .	4
dplyr_methods . . . . .	5
is_fr_field . . . . .	6
read_fr_tdr . . . . .	7
update_field . . . . .	7
write_fr_tdr . . . . .	8
<b>Index</b>	<b>9</b>

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as_data_frame	<i>Coerce a <a href="#">fr_tdr</a> object into a data frame</i>
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### Description

Equivalent to `as.data.frame()`; directly using `tibble::as_tibble()` also works because its input is first coerced with `as.data.frame()`

### Usage

```
as_data_frame(x, ...)
```

### Arguments

x	a <a href="#">fr_tdr</a> object
...	ignored

### Value

a data frame

### Examples

```
as_fr_tdr(mtcars, name = "mtcars") |>
  as_data_frame()
```

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as_fr_field	Coerce character, factor, numeric, logical, and Date vectors into <a href="#">fr_field</a> objects
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## Description

The supported classes of R objects are converted to the corresponding frictionless type:

R class	fr type
character()	string
factor()	string (with <code>enum(constraints = levels(x))</code> )
numeric(), integer()	number
logical()	boolean
Date	date

## Usage

```
as_fr_field(x, ...)
```

## Arguments

x	a character, factor, numeric, integer, logical, or Date vector
...	<dynamic-dots> required (name) and optional (title, description) <b>field descriptors</b>

## Value

a [fr\\_field](#) object

## Examples

```
as_fr_field(1:10, "example_integer") # -> frictionless number
as_fr_field((1:10) * 0.1, "example_double") # -> frictionless number
as_fr_field(letters, "example_character") # -> frictionless string
as_fr_field(factor(letters), "example_factor") # -> frictionless string with enum constraints
as_fr_field(c(TRUE, FALSE, TRUE), "example_logical") # -> frictionless boolean
as_fr_field(as.Date(c("2023-04-23", "2004-12-31")), "example_date") # -> frictionless date
```

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as\_fr\_tdr *Coerce a data frame into a fr\_tdr object*

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### Description

Coerce a data frame into a `fr_tdr` object

### Usage

```
as_fr_tdr(x, ...)
```

### Arguments

`x` a `data.frame`  
`...` <dynamic-dots> required (name) and optional **tabular-data-resource properties** (e.g., path, version, title, homepage, description)

### Details

Use the `.template` argument to provide a template `fr_tdr` object from which table-specific (i.e. "name", "version", "title", "homepage", "description") and field-specific metadata will be copied; note that all metadata provided in `...` will be ignored if this argument is provided

### Value

a `fr_tdr` object

### Examples

```
as_fr_tdr(mtcars, name = "mtcars")
S7::prop(as_fr_tdr(mtcars, name = "mtcars"), "schema")
```

---

as\_list *Coerce a fr\_tdr object into a list*

---

### Description

equivalent to `as.list()`

### Usage

```
as_list(x, ...)
```

### Arguments

`x` a `fr_tdr` object  
`...` ignored

**Value**

a list representing the frictionless metadata descriptor

**Examples**

```
as_fr_tdr(mtcars, name = "mtcars") |>
  as_list()
```

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dplyr\_methods

*dplyr methods for fr\_tdr objects*


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**Description**

Some basic dplyr functions are re-implemented here for for `fr_tdr` objects. The input is converted with `as.data.frame()` before being passed to the dplyr function. The resulting tibble object is converted back into a `fr_tdr` object, matching table- and field-specific metadata where possible by using `as_fr_tdr()` and specifying the `.template` argument.

<b>dplyr</b>	<b>fr</b>
<code>mutate()</code>	<code>fr_mutate()</code>
<code>rename()</code>	<code>fr_rename()</code>
<code>select()</code>	<code>fr_select()</code>
<code>filter()</code>	<code>fr_filter()</code>
<code>summarise()</code>	<code>fr_summarise()</code>
<code>arrange()</code>	<code>fr_arrange()</code>

**Usage**

```
fr_mutate(x, ...)
```

```
fr_rename(x, ...)
```

```
fr_select(x, ...)
```

```
fr_filter(x, ...)
```

```
fr_summarize(x, ...)
```

```
fr_arrange(x, ...)
```

**Arguments**

`x` a `fr_tdr` object

`...` passed to the underlying dplyr function

**Value**

a `fr_tdr` object

**Examples**

```
read_fr_tdr(fs::path_package("fr", "hamilton_poverty_2020")) |>
  fr_mutate(next_year = year + 1) |>
  fr_rename(new_year = next_year) |>
  fr_select(-new_year) |>
  fr_filter(fraction_poverty > 0.1) |>
  fr_summarize(median_poverty_fraction = median(fraction_poverty)) |>
  fr_arrange(median_poverty_fraction)
```

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is\_fr\_field

*Test if an object is a `fr_field` object*

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**Description**

Test if an object is a `fr_field` object

**Usage**

```
is_fr_field(x)
```

**Arguments**

x                    an object to test

**Value**

TRUE if object is a `fr_field` object, FALSE otherwise

**Examples**

```
is_fr_field(letters)
is_fr_field(as_fr_field(letters, "letters"))
```

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read_fr_tdr	<i>read a tabular-data-resource into R</i>
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**Description**

read a tabular-data-resource into R

**Usage**

```
read_fr_tdr(file)
```

**Arguments**

file	Either a path to a file, a connection, or literal data (either a single string or a raw vector). <code>file</code> can also be a character vector containing multiple filepaths or a list containing multiple connections. Files ending in <code>.gz</code> , <code>.bz2</code> , <code>.xz</code> , or <code>.zip</code> will be automatically uncompressed. Files starting with <code>http://</code> , <code>https://</code> , <code>ftp://</code> , or <code>ftps://</code> will be automatically downloaded. Remote <code>gz</code> files can also be automatically downloaded and decompressed. Literal data is most useful for examples and tests. To be recognised as literal data, wrap the input with <code>I()</code> .
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**Details**

A file path (or url) representing a folder that contains a "tabular-data-resource.yaml" can be used in `file`.

**Value**

a `fr_tdr` object

**Examples**

```
read_fr_tdr(fs::path_package("fr", "hamilton_poverty_2020"))
```

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update_field	<i>add or update field-specific metadata in a fr_tdr object</i>
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**Description**

add or update field-specific metadata in a `fr_tdr` object

**Usage**

```
update_field(x, field, ...)
```

**Arguments**

x                    a `fr_tdr` object  
 field                character name of field in x to update  
 ...                  **table schema field descriptors** (e.g., title, description)

**Value**

an `fr_tdr` object containing the updated field

**Examples**

```
my_mtcars <-
  mtcars |>
  as_fr_tdr(name = "mtcars") |>
  update_field("mpg", title = "Miles Per Gallon")

S7::prop(my_mtcars, "schema")
```

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write\_fr\_tdr                    *write a fr\_tdr object to disk*

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**Description**

The name property of the `fr_tdr` object is used to write a frictionless tabular-data-resource to disk. For example, if `name = "my_data"`, then a folder named `my_data` would be created with (1) `my_data.csv` and (2) `tabular-data-resource.yaml`.

**Usage**

```
write_fr_tdr(x, dir)
```

**Arguments**

x                    a `fr_tdr` object to write to disk  
 dir                  path to directory where tabular-data-resource folder will be created

**Value**

x (invisibly)

# Index

`as_data_frame`, 2  
`as_fr_field`, 3  
`as_fr_tdr`, 4  
`as_list`, 4  
  
`dplyr_methods`, 5  
  
`fr_arrange` (`dplyr_methods`), 5  
`fr_field`, 3, 6  
`fr_filter` (`dplyr_methods`), 5  
`fr_mutate` (`dplyr_methods`), 5  
`fr_rename` (`dplyr_methods`), 5  
`fr_select` (`dplyr_methods`), 5  
`fr_summarize` (`dplyr_methods`), 5  
`fr_tdr`, 2, 4–8  
  
`is_fr_field`, 6  
  
`read_fr_tdr`, 7  
  
`update_field`, 7  
  
`write_fr_tdr`, 8