

# Package ‘geojsonsf’

October 13, 2022

**Type** Package

**Title** GeoJSON to Simple Feature Converter

**Version** 2.0.3

**Date** 2022-05-31

**Description** Converts Between GeoJSON and simple feature objects.

**License** MIT + file LICENSE

**URL** <https://github.com/SymbolixAU/geojsonsf>

**BugReports** <https://github.com/SymbolixAU/geojsonsf/issues>

**Encoding** UTF-8

**LazyData** true

**Depends** R (>= 3.3.0)

**SystemRequirements** C++11

**LinkingTo** geometries, jsonify (>= 1.1.1), rapidjsonr (>= 1.2.0), Rcpp, sfheaders (>= 0.2.2)

**Imports** Rcpp

**RoxygenNote** 7.1.0

**Suggests** covr, jsonify, knitr, rmarkdown, tinytest

**VignetteBuilder** knitr

**NeedsCompilation** yes

**Author** David Cooley [aut, cre]

**Maintainer** David Cooley <dcooley@symbolix.com.au>

**Repository** CRAN

**Date/Publication** 2022-05-30 23:20:02 UTC

## R topics documented:

df_geojson . . . . .	2
geojson_sf . . . . .	3
geojson_sfc . . . . .	5
geojson_wkt . . . . .	6
geo_melbourne . . . . .	7
sfc_geojson . . . . .	7
sf_geojson . . . . .	8

<b>Index</b>	<b>10</b>
--------------	-----------

---

df_geojson	<i>df to GeoJSON</i>
------------	----------------------

---

### Description

Converts data.frame objects to GeoJSON. Each row is considered a POINT

### Usage

```
df_geojson(
  df,
  lon,
  lat,
  z = NULL,
  m = NULL,
  atomise = FALSE,
  simplify = TRUE,
  digits = NULL,
  factors_as_string = TRUE
)
```

### Arguments

df	data.frame
lon	column of df containing the longitude data
lat	column of df containing the latitude data
z	column of df containing the Z attribute of the GeoJSON
m	column of df containing the M attribute of the GeoJSON. If supplied, you must also supply z
atomise	logical indicating if the data.frame should be converted into a vector of GeoJSON objects
simplify	logical indicating if data.frame without property columns should simplify (TRUE) into a vector of GeoJSON, or (FALSE). If atomise is TRUE this argument is ignored.

`digits` integer specifying the number of decimal places to round numerics. numeric values are coerced using `as.integer`, which may round-down the value you supply. Default is NULL - no rounding

`factors_as_string` logical indicating if factors should be treated as strings. Defaults to TRUE.

**Value**

vector of GeoJSON

**Examples**

```
df <- data.frame(lon = c(1:5, NA), lat = c(1:5, NA), id = 1:6, val = letters[1:6])
df_geojson( df, lon = "lon", lat = "lat")
df_geojson( df, lon = "lon", lat = "lat", atomise = TRUE)
```

```
df <- data.frame(lon = c(1:5, NA), lat = c(1:5, NA) )
df_geojson( df, lon = "lon", lat = "lat")
df_geojson( df, lon = "lon", lat = "lat", simplify = FALSE)
```

```
df <- data.frame(lon = c(1:5), lat = c(1:5), elevation = c(1:5) )
df_geojson( df, lon = "lon", lat = "lat", z = "elevation")
df_geojson( df, lon = "lon", lat = "lat", z = "elevation", simplify = FALSE)
```

```
df <- data.frame(lon = c(1:5), lat = c(1:5), elevation = c(1:5), id = 1:5 )
df_geojson( df, lon = "lon", lat = "lat", z = "elevation")
df_geojson( df, lon = "lon", lat = "lat", z = "elevation", atomise = TRUE)
```

```
## to sf objects
geo <- df_geojson( df, lon = "lon", lat = "lat", z = "elevation")
sf <- geojson_sf( geo )
```

---

geojson\_sf

*Geojson to sf*

---

**Description**

Converts GeoJSON to an 'sf' object

**Usage**

```
geojson_sf(
  geojson,
  expand_geometries = FALSE,
  input = NULL,
  wkt = NULL,
```

```

    crs = NULL,
    proj4string = NULL,
    buffer_size = 1024
  )

```

### Arguments

geojson	string or vector of GeoJSON, or a URL or file pointing to a geojson file
expand_geometries	logical indicating whether to unnest GEOMETRYCOLLECTION rows. see details
input	user input for coordinate reference system object
wkt	well-known text for coordinate reference system object
crs	deprecated. coordinate reference system. See Details
proj4string	deprecated. proj4string. See Details
buffer_size	size of buffer used when reading a file from disk. Defaults 1024

### Details

specifying `expand_geometries = TRUE` will expand individual GEOMETRYCOLLECTION geometries to their own row in the resulting 'sf' object. If the geometries are part of a Feature (i.e., with properties), the properties will be repeated on each row.

The GEOMETRYCOLLECTION information is not kept when using `expand_geometries = TRUE`. Therefore, it is not possible to reconstruct the GEOMETRYCOLLECTION after unnesting it.

Geojson specification RFC7946 <https://tools.ietf.org/html/rfc7946#page-12> says all CRS should be the World Geodetic System 1984 (WGS 84) [WGS84] datum, with longitude and latitude units of decimal degrees. This is equivalent to the coordinate reference system identified by the Open Geospatial Consortium (OGC) URN `urn:ogc:def:crs:OGC::CRS84`

`geojson_sf` and `geojson_sf` automatically set the CRS to WGS 84. The fields `input` and `wkt` let you to overwrite the defaults.

### Examples

```

## character string of GeoJSON

## load 'sf' for print methods
# library(sf)
geojson <- '{ "type" : "Point", "coordinates" : [0, 0] }'
geojson_sf(geojson)

## Not run:
## GeoJSON at a url
myurl <- "http://eric.clst.org/assets/wiki/uploads/Stuff/gz_2010_us_050_00_500k.json"
sf <- geojson_sf(myurl)

## End(Not run)

```

---

geojson_sfc	<i>Geojson to sfc</i>
-------------	-----------------------

---

## Description

Extracts geometries from GeoJSON and returns an 'sfc' object

## Usage

```
geojson_sfc(
  geojson,
  expand_geometries = FALSE,
  input = NULL,
  wkt = NULL,
  crs = NULL,
  proj4string = NULL,
  buffer_size = 1024
)
```

## Arguments

geojson	string or vector of GeoJSON, or a URL or file pointing to a geojson file
expand_geometries	logical indicating whether to unnest GEOMETRYCOLLECTION rows. see details
input	user input for coordinate reference system object
wkt	well-known text for coordinate reference system object
crs	deprecated. coordinate reference system. See Details
proj4string	deprecated. proj4string. See Details
buffer_size	size of buffer used when reading a file from disk. Defaults 1024

## Details

specifying `expand_geometries = TRUE` will expand individual GEOMETRYCOLLECTION geometries to their own row in the resulting 'sf' object. If the geometries are part of a Feature (i.e., with properties), the properties will be repeated on each row.

The GEOMETRYCOLLECTION information is not kept when using `expand_geometries = TRUE`. Therefore, it is not possible to reconstruct the GEOMETRYCOLLECTION after unnesting it.

Geojson specification RFC7946 <https://tools.ietf.org/html/rfc7946#page-12> says all CRS should be the World Geodetic System 1984 (WGS 84) [WGS84] datum, with longitude and latitude units of decimal degrees. This is equivalent to the coordinate reference system identified by the Open Geospatial Consortium (OGC) URN `urn:ogc:def:crs:OGC::CRS84`

`geojson_sfc` and `geojson_sf` automatically set the CRS to WGS 84. The fields `input` and `wkt` let you to overwrite the defaults.

## Examples

```
## character string of GeoJSON

## load 'sf' for print methods
# library(sf)
geojson <- '{ "type":"Point","coordinates":[0,0] }'
geojson_sf<-sf(geojson)

geojson <- '[
  { "type":"Point","coordinates":[0,0]},
  {"type":"LineString","coordinates":[[0,0],[1,1]]}
]'
```

```
geojson_sf<-sf( geojson )

## Not run:
## GeoJSON at a url
myurl <- "http://eric.clst.org/assets/wiki/uploads/Stuff/gz_2010_us_050_00_500k.json"
sf <- sf(geojson_sf(myurl))

## End(Not run)
```

---

geojson\_wkt

*Geojson to WKT*

---

## Description

Converts GeoJSON to Well-Known Text

## Usage

```
geojson_wkt(geojson)
```

## Arguments

geojson                    string or vector of GeoJSON, or a URL or file pointing to a geojson file

## Value

data.frame with a 'geometry' column of well-known text

## Examples

```
geojson <- '{ "type" : "Point", "coordinates" : [0, 0] }'
```

```
geojson_wkt(geojson)
```

---

geo_melbourne	<i>geo_melbourne</i>
---------------	----------------------

---

**Description**

GeoJSON data of Melbourne's Inner suburbs.

**Usage**

```
geo_melbourne
```

**Format**

An object of class `geojson` (inherits from `json`) of length 1.

---

sfc_geojson	<i>sfc to GeoJSON</i>
-------------	-----------------------

---

**Description**

Converts 'sfc' objects to GeoJSON

**Usage**

```
sfc_geojson(sfc, digits = NULL)
```

**Arguments**

<code>sfc</code>	simple feature collection object
<code>digits</code>	integer specifying the number of decimal places to round numeric coordinates. numeric values are coerced using <code>as.integer</code> , which may round-down the value you supply. Default is <code>NULL</code> - no rounding

**Value**

vector of GeoJSON

**Examples**

```
## Not run:  
library(sf)  
sf <- sf::st_sfc(list(sf::st_point(c(0,0)), sf::st_point(c(1,1))))  
sfc_geojson(sf)  
  
## End(Not run)
```

sf\_geojson

*sf to GeoJSON***Description**

Converts 'sf' objects to GeoJSON

**Usage**

```
sf_geojson(
  sf,
  atomise = FALSE,
  simplify = TRUE,
  digits = NULL,
  factors_as_string = TRUE
)
```

**Arguments**

sf	simple feature object
atomise	logical indicating if the sf object should be converted into a vector of GeoJSON objects
simplify	logical indicating if sf objects without property columns should simplify (TRUE) into a vector of GeoJSON, or return a Featurecollection with empty property fields (FALSE). If atomise is TRUE this argument is ignored.
digits	integer specifying the number of decimal places to round numerics. numeric values are coerced using <code>as.integer</code> , which may round-down the value you supply. Default is NULL - no rounding
factors_as_string	logical indicating if factors should be treated as strings. Defaults to TRUE.

**Value**

vector of GeoJSON

**Examples**

```
## Not run:
library(sf)
sf <- sf::st_sf(geometry = sf::st_sfc(list(sf::st_point(c(0,0)), sf::st_point(c(1,1))))))
sf$id <- 1:2
sf_geojson(sf)
sf_geojson(sf, atomise = T)

ls <- st_linestring(rbind(c(0,0),c(1,1),c(2,1)))
mls <- st_multilinestring(list(rbind(c(2,2),c(1,3)), rbind(c(0,0),c(1,1),c(2,1))))
sfc <- st_sfc(ls,mls)
```



```
sf <- st_sf(sfc)
sf_geojson( sf )
sf_geojson( sf, simplify = FALSE )
```

```
## End(Not run)
```

# Index

## \* datasets

geo\_melbourne, 7

df\_geojson, 2

geo\_melbourne, 7

geojson\_sf, 3

geojson\_sfc, 5

geojson\_wkt, 6

sf\_geojson, 8

sfc\_geojson, 7