

Package ‘geojson’

November 8, 2017

Type Package

Title Classes for 'GeoJSON'

Description Classes for 'GeoJSON' to make working with 'GeoJSON' easier. Includes S3 classes for 'GeoJSON' classes with brief summary output, and a few methods such as extracting and adding bounding boxes, properties, and coordinate reference systems; linting through the 'geojsonlint' package; and serializing to/from 'Geobuf' binary 'GeoJSON' format.

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URL <https://github.com/ropensci/geojson>

BugReports <https://github.com/ropensci/geojson/issues>

LazyData true

VignetteBuilder knitr

Imports methods, sp, jsonlite (>= 1.5), protolite (>= 1.7), jqr (>= 1.0.0), magrittr, lazyeval

Suggests geojsonlint (>= 0.2.0), tibble, testthat, knitr, rmarkdown

RoxygenNote 6.0.1

NeedsCompilation no

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R topics documented:

geojson-package	2
as.geojson	4
bbox	6

crs	7
feature	8
featurecollection	9
geobuf	10
geojson_data	11
geometrycollection	12
geo_bbox	13
geo_pretty	14
geo_type	15
geo_write	16
linestring	17
linting_opts	17
multilinestring	18
multipoint	19
multipolygon	20
point	21
polygon	21
properties	22
to_geojson	23

Index	25
--------------	-----------

geojson-package	<i>geojson</i>
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Description

Classes for GeoJSON to make working with GeoJSON easier

Package API

GeoJSON objects:

- [feature](#) - Feature
- [featurecollection](#) - FeatureCollection
- [geometrycollection](#) - GeometryCollection
- [linestring](#) - LineString
- [multilinestring](#) - MultiLineString
- [multipoint](#) - MultiPoint
- [multipolygon](#) - MultiPolygon
- [point](#) - Point
- [polygon](#) - Polygon

The above are assigned two classes. All of them are class **geojson**, but also have a class name that is **geo** plus the name of the geometry, e.g., **geopolygon** for polygon.

GeoJSON properties:

- [properties_add](#), [properties_get](#) - Add or get properties
- [crs_add](#), [crs_get](#) - Add or get CRS
- [bbox_add](#), [bbox_get](#) - Add or get bounding box

GeoJSON operations:

- [geo_bbox](#) - calculate a bounding box for any GeoJSON object
- [geo_pretty](#) - pretty print any GeoJSON object
- [geo_type](#) - get the object type for any GeoJSON object
- [geo_write](#) - easily write any GeoJSON to a file
- More complete GeoJSON operations are provided in the package **geoops**

GeoJSON/Geobuf serialization:

- [from_geobuf](#) - Geobuf to GeoJSON
- [to_geobuf](#) - GeoJSON to Geobuf
- Check out <https://github.com/mapbox/geobuf> for information on the Geobuf format

Coordinate Reference System

According to RFC 7946 (<https://tools.ietf.org/html/rfc7946#page-12>) the CRS for all GeoJSON objects must be WGS-84, equivalent to urn:ogc:def:crs:OGC::CRS84. And lat/long must be in decimal degrees.

Given the above, but considering that GeoJSON blobs exist that have CRS attributes in them, we provide CRS helpers in this package. But moving forward these are not likely to be used much.

Coordinate precision

According to RFC 7946 (<https://tools.ietf.org/html/rfc7946#section-11.2>) consider that 6 decimal places amounts to ~10 centimeters, a precision well within that of current GPS systems. Further, A GeoJSON text containing many detailed Polygons can be inflated almost by a factor of two by increasing coordinate precision from 6 to 15 decimal places - so consider whether it is worth it to have more decimal places.

Author(s)

Scott Chamberlain, Jeroen Ooms

`as.geojson`*Geojson class*

Description

Geojson class

Usage

```
as.geojson(x)
```

```
## S4 method for signature 'json'  
as.geojson(x)
```

```
## S4 method for signature 'geojson'  
as.geojson(x)
```

```
## S4 method for signature 'character'  
as.geojson(x)
```

```
## S4 method for signature 'SpatialPointsDataFrame'  
as.geojson(x)
```

```
## S4 method for signature 'SpatialPoints'  
as.geojson(x)
```

```
## S4 method for signature 'SpatialLinesDataFrame'  
as.geojson(x)
```

```
## S4 method for signature 'SpatialLines'  
as.geojson(x)
```

```
## S4 method for signature 'SpatialPolygonsDataFrame'  
as.geojson(x)
```

```
## S4 method for signature 'SpatialPolygons'  
as.geojson(x)
```

Arguments

`x` input, an object of class `character`, `json`, `SpatialPoints`, `SpatialPointsDataFrame`, `SpatialLines`, `SpatialLinesDataFrame`, `SpatialPolygons`, or `SpatialPolygonsDataFrame`

Details

The `print.geojson` method prints the geojson geometry type, the bounding box, number of features (if applicable), and the geometries and their lengths

Value

an object of class `geojson/json`

Examples

```
# character
as.geojson(geojson_data$featurecollection_point)
as.geojson(geojson_data$polygons_average)
as.geojson(geojson_data$polygons_aggregate)
as.geojson(geojson_data$points_count)

# sp classes

## SpatialPoints
library(sp)
x <- c(1,2,3,4,5)
y <- c(3,2,5,1,4)
s <- SpatialPoints(cbind(x,y))
as.geojson(s)

## SpatialPointsDataFrame
s <- SpatialPointsDataFrame(cbind(x,y), mtcars[1:5,])
as.geojson(s)

## SpatialLines
L1 <- Line(cbind(c(1,2,3), c(3,2,2)))
L2 <- Line(cbind(c(1.05,2.05,3.05), c(3.05,2.05,2.05)))
L3 <- Line(cbind(c(1,2,3),c(1,1.5,1)))
Ls1 <- Lines(list(L1), ID = "a")
Ls2 <- Lines(list(L2, L3), ID = "b")
sl1 <- SpatialLines(list(Ls1))
as.geojson(sl1)

## SpatialLinesDataFrame
sl12 <- SpatialLines(list(Ls1, Ls2))
dat <- data.frame(X = c("Blue", "Green"),
                 Y = c("Train", "Plane"),
                 Z = c("Road", "River"), row.names = c("a", "b"))
sl12 <- SpatialLinesDataFrame(sl12, dat)
as.geojson(sl12)

## SpatialPolygons
poly1 <- Polygons(list(Polygon(cbind(c(-100,-90,-85,-100),
c(40,50,45,40)))), "1")
poly2 <- Polygons(list(Polygon(cbind(c(-90,-80,-75,-90),
c(30,40,35,30)))), "2")
sp_poly <- SpatialPolygons(list(poly1, poly2), 1:2)
as.geojson(sp_poly)

## SpatialPolygonsDataFrame
sp_polydf <- as(sp_poly, "SpatialPolygonsDataFrame")
as.geojson(sp_polydf)
```

bbox *Add or get bounding box*

Description

Add or get bounding box

Usage

```
bbox_add(x, bbox = NULL)
```

```
bbox_get(x)
```

Arguments

x	An object of class <code>geojson</code>
bbox	(numeric) a vector or list of length 4. If <code>NULL</code> , the bounding box is calculated for you

Details

Note that `bbox_get` outputs the `bbox` if it exists, but does not calculate it from the `geojson`. See [geo_bbox](#) to calculate a bounding box. Bounding boxes can be 2D or 3D.

Value

a bounding box, of the form `[west, south, east, north]` for 2D or of the form `[west, south, min-altitude, east, north, max-altitude]` for 3D

References

<https://tools.ietf.org/html/rfc7946#section-5>

Examples

```
# make a polygon
x <- '{ "type": "Polygon",
"coordinates": [
  [ [100.0, 0.0], [101.0, 0.0], [101.0, 1.0], [100.0, 1.0], [100.0, 0.0] ]
]
}'
(y <- polygon(x))

# add bbox - without an input, we figure out the 2D bbox for you
y %>% feature() %>% bbox_add()
## 2D bbox
y %>% feature() %>% bbox_add(c(100.0, -10.0, 105.0, 10.0))
## 3D bbox
y %>% feature() %>% bbox_add(c(100.0, -10.0, -100.0, 105.0, 10.0, 0.0))
```

```
# get bounding box
z <- y %>% feature() %>% bbox_add()
bbox_get(z)

## returns NULL if no bounding box
bbox_get(x)
```

crs

Add or get CRS

Description

Add or get CRS

Usage

```
crs_add(x, crs)
```

```
crs_get(x)
```

Arguments

x	An object of class <code>geojson</code>
crs	(character) a CRS string. required.

Details

According to RFC 7946 (<https://tools.ietf.org/html/rfc7946#page-12>) the CRS for all GeoJSON objects must be WGS-84, equivalent to `urn:ogc:def:crs:OGC::CRS84`. And lat/long must be in decimal degrees.

Given the above, but considering that GeoJSON blobs exist that have CRS attributes in them, we provide CRS helpers here. But moving forward these are not likely to be used much.

References

<https://github.com/OSGeo/proj.4>, <http://geojson.org/geojson-spec.html#coordinate-reference-system-ob>

Examples

```
x <- '{ "type": "Polygon",
"coordinates": [
  [ [100.0, 0.0], [101.0, 0.0], [101.0, 1.0], [100.0, 1.0], [100.0, 0.0] ]
]
}'

# add crs
crs <- '{"type": "name",
```

```

    "properties": {
      "name": "urn:ogc:def:crs:OGC:1.3:CRS84"
    }
  }'
x %>% feature() %>% crs_add(crs)

# get crs
z <- x %>% feature() %>% crs_add(crs)
crs_get(z)

```

feature

feature class

Description

feature class

Usage

```
feature(x)
```

Arguments

x input

Details

Feature objects:

- A feature object must have a member with the name "geometry". The value of the geometry member is a geometry object as defined above or a JSON null value.
- A feature object must have a member with the name "properties". The value of the properties member is an object (any JSON object or a JSON null value).
- If a feature has a commonly used identifier, that identifier should be included as a member of the feature object with the name "id".

Examples

```

# point -> feature
x <- '{ "type": "Point", "coordinates": [100.0, 0.0] }'
point(x) %>% feature()

# multipoint -> feature
x <- '{"type": "MultiPoint", "coordinates": [ [100.0, 0.0], [101.0, 1.0] ] }'
multipoint(x) %>% feature()

# linestring -> feature
x <- '{ "type": "LineString", "coordinates": [ [100.0, 0.0], [101.0, 1.0] ] }'
linestring(x) %>% feature()

```



```
# multilinestring -> feature
x <- '{ "type": "MultiLineString",
  "coordinates": [ [ [100.0, 0.0], [101.0, 1.0] ], [ [102.0, 2.0], [103.0, 3.0] ] ] }'
multilinestring(x) %>% feature()

# add to a data.frame
library('tibble')
data_frame(a = 1:5, b = list(multilinestring(x)))
```

featurecollection *featurecollection class*

Description

featurecollection class

Usage

```
featurecollection(x)
```

Arguments

x input

Examples

```
file <- system.file("examples", 'featurecollection1.geojson',
  package = "geojson")
file <- system.file("examples", 'featurecollection2.geojson',
  package = "geojson")
str <- paste0(readLines(file), collapse = " ")
(y <- featurecollection(str))
geo_type(y)
geo_pretty(y)
geo_write(y, f <- tempfile(fileext = ".geojson"))
jsonlite::fromJSON(f, FALSE)
unlink(f)

# add to a data.frame
library('tibble')
data_frame(a = 1:5, b = list(y))

# features to featurecollection
x <- '{ "type": "Point", "coordinates": [100.0, 0.0] }'
point(x) %>% feature() %>% featurecollection()

## all points
x <- '{ "type": "Point", "coordinates": [100.0, 0.0] }'
y <- '{ "type": "Point", "coordinates": [100.0, 50.0] }'
featls <- lapply(list(x, y), function(z) feature(point(z)))
featurecollection(featls)
```

geobuf	<i>Geobuf serialization</i>
--------	-----------------------------

Description

Geobuf serialization

Usage

```
from_geobuf(x, pretty = FALSE)
```

```
to_geobuf(x, file = NULL, decimals = 6)
```

Arguments

x	(character) a file or raw object for from_geobuf, and json string for to_geobuf
pretty	(logical) pretty print JSON. Default: FALSE
file	(character) file to write protobuf to. if NULL, geobuf raw binary returned
decimals	(integer) how many decimals (digits behind the dot) to store for numbers

Details

from_geobuf uses [geobuf2json](#), while to_geobuf uses [json2geobuf](#)

Note that **protolite** expects either a **Feature**, **FeatureCollection**, or **Geometry** class geojson object, Thus, for to_geobuf we check the geojson class, and convert to a **Feature** if the class is something other than the acceptable set.

Value

for from_geobuf JSON as a character string, and for to_geobuf raw or file written to disk

References

Geobuf is a compact binary encoding for geographic data using protocol buffers <https://github.com/mapbox/geobuf>

Examples

```
file <- system.file("examples/test.pb", package = "geojson")
(json <- from_geobuf(file))
from_geobuf(file, pretty = TRUE)
pb <- to_geobuf(json)
f <- tempfile(fileext = ".pb")
to_geobuf(json, f)
from_geobuf(f)

object.size(json)
```

```

object.size(pb)
file.info(file)$size
file.info(f)$size

file <- system.file("examples/featurecollection1.geojson",
  package = "geojson")
json <- paste0(readLines(file), collapse = "")
to_geobuf(json)

# other geojson class objects
x <- '{ "type": "Polygon",
"coordinates": [
  [ [100.0, 0.0], [101.0, 0.0], [101.0, 1.0], [100.0, 1.0], [100.0, 0.0] ]
]
}'
(y <- polygon(x))
to_geobuf(y)

x <- '{"type": "MultiPoint", "coordinates": [ [100.0, 0.0], [101.0, 1.0] ] }'
(y <- multipoint(x))
to_geobuf(y)

```

geojson_data

Data for use in examples

Description

Data for use in examples

Format

A list of character strings of points or polygons in FeatureCollection or Feature Geojson formats.

Details

The data objects included in the list, accessible by name

- featurecollection_point - FeatureCollection with a single point
- filter_features - FeatureCollection of points
- points_average - FeatureCollection of points
- polygons_average - FeatureCollection of polygons
- points_count - FeatureCollection of points
- polygons_count - FeatureCollection of polygons
- points_within - FeatureCollection of points
- polygons_within - FeatureCollection of polygons
- poly - Feaure of a single 1 degree by 1 degree polygon

- multipoly - FeatureCollection of two 1 degree by 1 degree polygons
- polygons_aggregate - FeatureCollection of Polygons from turf.js examples
- points_aggregate - FeatureCollection of Points from turf.js examples

geometrycollection *geometrycollection class*

Description

geometrycollection class

Usage

```
geometrycollection(x)
```

Arguments

x input

Examples

```
x <- '{
  "type": "GeometryCollection",
  "geometries": [
    {
      "type": "Point",
      "coordinates": [100.0, 0.0]
    },
    {
      "type": "LineString",
      "coordinates": [ [101.0, 0.0], [102.0, 1.0] ]
    }
  ]
}'
(y <- geometrycollection(x))
geo_type(y)
geo_pretty(y)
geo_write(y, f <- tempfile(fileext = ".geojson"))
jsonlite::fromJSON(f, FALSE)
unlink(f)

# bigger geometrycollection
file <- system.file("examples", "geometrycollection1.geojson", package = "geojson")
(y <- geometrycollection(paste0(readLines(file), collapse="")))
geo_type(y)
geo_pretty(y)
```

geo_bbox	<i>Calculate a bounding box</i>
----------	---------------------------------

Description

Calculate a bounding box

Usage

```
geo_bbox(x)
```

Arguments

x an object of class `geojson`

Details

Supports inputs of type: character, point, multipoint, linestring, multilinestring, polygon, multipolygon, feature, and featurecollection

On character inputs, we lint the input to make sure it's proper JSON and GeoJSON, then calculate the bounding box

Value

a vector of four doubles: min lon, min lat, max lon, max lat

Examples

```
# point
x <- '{ "type": "Point", "coordinates": [100.0, 0.0] }'
(y <- point(x))
geo_bbox(y)
y %>% feature() %>% geo_bbox()

# multipoint
x <- '{"type": "MultiPoint", "coordinates": [ [100.0, 0.0], [101.0, 1.0] ] }'
(y <- multipoint(x))
geo_bbox(y)
y %>% feature() %>% geo_bbox()

# linestring
x <- '{ "type": "LineString", "coordinates": [ [100.0, 0.0], [101.0, 1.0] ] }'
(y <- linestring(x))
geo_bbox(y)
y %>% feature() %>% geo_bbox()
file <- system.file("examples", 'linestring_one.geojson',
  package = "geojson")
str <- paste0(readLines(file), collapse = " ")
(y <- linestring(str))
```

```

geo_bbox(y)
y %>% feature() %>% geo_bbox()

# multilinestring
x <- '{ "type": "MultiLineString",
  "coordinates": [ [ [100.0, 0.0], [101.0, 1.0] ], [ [102.0, 2.0],
    [103.0, 3.0] ] ] }'
(y <- multilinestring(x))
geo_bbox(y)
y %>% feature() %>% geo_bbox()

# polygon
x <- '{ "type": "Polygon",
  "coordinates": [
    [ [100.0, 0.0], [101.0, 0.0], [101.0, 1.0], [100.0, 1.0], [100.0, 0.0] ]
  ]
}'
(y <- polygon(x))
geo_bbox(y)
y %>% feature() %>% geo_bbox()

# multipolygon
x <- '{ "type": "MultiPolygon",
  "coordinates": [
    [[ [102.0, 2.0], [103.0, 2.0], [103.0, 3.0], [102.0, 3.0], [102.0, 2.0] ]],
    [[ [100.0, 0.0], [101.0, 0.0], [101.0, 1.0], [100.0, 1.0], [100.0, 0.0] ]],
    [[ [100.2, 0.2], [100.8, 0.2], [100.8, 0.8], [100.2, 0.8], [100.2, 0.2] ] ]
  ]
}'
(y <- multipolygon(x))
geo_bbox(y)
y %>% feature() %>% geo_bbox()

# featurecollection
file <- system.file("examples", 'featurecollection2.geojson',
  package = "geojson")
str <- paste0(readLines(file), collapse = " ")
x <- featurecollection(str)
geo_bbox(x)

# character
file <- system.file("examples", 'featurecollection2.geojson',
  package = "geojson")
str <- paste0(readLines(file), collapse = " ")
geo_bbox(str)

# json
library('jsonlite')
geo_bbox(toJSON(fromJSON(str), auto_unbox = TRUE))

```

Description

Pretty print geojson

Usage

```
geo_pretty(x)
```

Arguments

x input, an object of class geojson

Details

Wrapper around [prettify](#)

Examples

```
geo_pretty(point('{ "type": "Point", "coordinates": [100.0, 0.0] }'))

x <- '{ "type": "Polygon",
"coordinates": [
  [ [100.0, 0.0], [100.0, 1.0], [101.0, 1.0], [101.0, 0.0], [100.0, 0.0] ]
]
}'
poly <- polygon(x)
geo_pretty(poly)
```

geo_type

Get geometry type

Description

Get geometry type

Usage

```
geo_type(x)
```

Arguments

x input, an object of class geojson

Examples

```
geo_type(point('{ "type": "Point", "coordinates": [100.0, 0.0] }'))

x <- '{ "type": "Polygon",
"coordinates": [
  [ [100.0, 0.0], [100.0, 1.0], [101.0, 1.0], [101.0, 0.0], [100.0, 0.0] ]
]
}'
poly <- polygon(x)

geo_type(poly)
```

geo_write

Write geojson to disk

Description

Write geojson to disk

Usage

```
geo_write(x, file)
```

Arguments

x	input, an object of class geojson
file	(character) a file path

Details

Wrapper around [toJSON](#) and [cat](#)

Examples

```
file <- tempfile(fileext = ".geojson")
geo_write(
  point('{ "type": "Point", "coordinates": [100.0, 0.0] }'),
  file
)
readLines(file)
unlink(file)
```

linestring	<i>linestring class</i>
------------	-------------------------

Description

linestring class

Usage

```
linestring(x)
```

Arguments

x	input
---	-------

Examples

```
x <- '{ "type": "LineString", "coordinates": [ [100.0, 0.0], [101.0, 1.0] ] }'  
(y <- linestring(x))  
geo_type(y)  
geo_pretty(y)  
geo_write(y, f <- tempfile(fileext = ".geojson"))  
jsonlite::fromJSON(f, FALSE)  
unlink(f)  
  
# add to a data.frame  
library('tibble')  
data_frame(a = 1:5, b = list(y))
```

linting_opts	<i>GeoJSON Linting</i>
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Description

GeoJSON Linting

Usage

```
linting_opts(lint = FALSE, method = "hint", error = FALSE)
```

Arguments

lint	(logical) lint geojson or not. Default: FALSE
method	(character) method to use: <ul style="list-style-type: none"> • hint - uses geojson_hint • lint - uses geojson_lint • validate - uses geojson_validate
error	(logical) Throw an error on parse failure? If TRUE, then function returns TRUE on success, and stop with the error message on error. Default: FALSE

Details

if you have **geojsonlint** installed, we can lint your GeoJSON inputs for you. If not, we skip that step.

Note that even if you aren't linting your geojson with **geojsonlint**, we still do some minimal checks.

Examples

```

linting_opts(lint = TRUE)

linting_opts(lint = TRUE, method = "hint")
linting_opts(lint = TRUE, method = "hint", error = TRUE)
linting_opts(lint = TRUE, method = "lint")
linting_opts(lint = TRUE, method = "lint", error = TRUE)
linting_opts(lint = TRUE, method = "validate")
linting_opts(lint = TRUE, method = "validate", error = TRUE)

```

 multilinestring

multilinestring class

Description

multilinestring class

Usage

```
multilinestring(x)
```

Arguments

x input

Examples

```
x <- '{ "type": "MultiLineString",
  "coordinates": [ [ [100.0, 0.0], [101.0, 1.0] ], [ [102.0, 2.0], [103.0, 3.0] ] ] }'
(y <- multilinestring(x))
y[1]
geo_type(y)
geo_pretty(y)
geo_write(y, f <- tempfile(fileext = ".geojson"))
jsonlite::fromJSON(f, FALSE)
unlink(f)

file <- system.file("examples", 'multilinestring_one.geojson', package = "geojson")
str <- paste0(readLines(file), collapse = " ")
(y <- multilinestring(str))
y[1]
geo_type(y)
geo_pretty(y)

# add to a data.frame
library('tibble')
data_frame(a = 1:5, b = list(y))
```

multipoint

*multipoint class***Description**

multipoint class

Usage

multipoint(x)

Arguments

x input

Examples

```
x <- '{"type": "MultiPoint", "coordinates": [ [100.0, 0.0], [101.0, 1.0] ] }'
(y <- multipoint(x))
geo_type(y)
geo_pretty(y)
geo_write(y, f <- tempfile(fileext = ".geojson"))
jsonlite::fromJSON(f, FALSE)
unlink(f)

# add to a data.frame
library('tibble')
```

```
data_frame(a = 1:5, b = list(y))

# as.geojson coercion
as.geojson(x)
```

multipolygon	<i>multipolygon class</i>
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Description

multipolygon class

Usage

```
multipolygon(x)
```

Arguments

x	input
---	-------

Examples

```
x <- '{ "type": "MultiPolygon",
"coordinates": [
  [[102.0, 2.0], [103.0, 2.0], [103.0, 3.0], [102.0, 3.0], [102.0, 2.0]],
  [[100.0, 0.0], [101.0, 0.0], [101.0, 1.0], [100.0, 1.0], [100.0, 0.0]],
  [[100.2, 0.2], [100.8, 0.2], [100.8, 0.8], [100.2, 0.8], [100.2, 0.2]]
]
}'
(y <- multipolygon(x))
geo_type(y)
geo_pretty(y)
geo_write(y, f <- tempfile(fileext = ".geojson"))
jsonlite::fromJSON(f, FALSE)
unlink(f)

# add to a data.frame
library('tibble')
data_frame(a = 1:5, b = list(y))
```

point	<i>point class</i>
-------	--------------------

Description

point class

Usage

```
point(x)
```

Arguments

x input

Examples

```
x <- '{ "type": "Point", "coordinates": [100.0, 0.0] }'  
(y <- point(x))  
geo_type(y)  
geo_pretty(y)  
geo_write(y, f <- tempfile(fileext = ".geojson"))  
jsonlite::fromJSON(f, FALSE)  
unlink(f)  
  
# add to a data.frame  
library('tibble')  
data_frame(a = 1:5, b = list(y))  
  
# as.geojson coercion  
as.geojson(x)
```

polygon	<i>polygon class</i>
---------	----------------------

Description

polygon class

Usage

```
polygon(x)
```

Arguments

x input

Examples

```
x <- '{ "type": "Polygon",
"coordinates": [
  [ [100.0, 0.0], [100.0, 1.0], [101.0, 1.0], [101.0, 0.0], [100.0, 0.0] ]
]
}'
(y <- polygon(x))
y[1]
geo_type(y)
geo_pretty(y)
geo_write(y, f <- tempfile(fileext = ".geojson"))
jsonlite::fromJSON(f, FALSE)
unlink(f)

x <- '{ "type": "Polygon",
"coordinates": [
  [ [100.0, 0.0], [101.0, 0.0], [101.0, 1.0], [100.0, 1.0], [100.0, 0.0] ],
  [ [100.2, 0.2], [100.8, 0.2], [100.8, 0.8], [100.2, 0.8], [100.2, 0.2] ]
]
}'
(y <- polygon(x))
y[1]
geo_type(y)
geo_pretty(y)

# add to a data.frame
library('tibble')
data_frame(a = 1:5, b = list(y))
```

properties

Add or get properties

Description

Add or get properties

Usage

```
properties_add(x, ..., .list = NULL)
```

```
properties_get(x, property)
```

Arguments

x	An object of class <code>geojson</code>
...	Properties to be added, supports NSE as well as SE
.list	a named list of properties to add. must be named
property	(character) property name

References

<http://geojson.org/geojson-spec.html>

Examples

```
# add properties
x <- '{ "type": "LineString", "coordinates": [ [100.0, 0.0], [101.0, 1.0] ]}'
(y <- linestring(x))
y %>% feature() %>% properties_add(population = 1000)

## add with a named list already created
x <- '{ "type": "LineString", "coordinates": [ [100.0, 0.0], [101.0, 1.0] ]}'
(y <- linestring(x))
props <- list(population = 1000, temperature = 89, size = 5)
y %>% feature() %>% properties_add(.list = props)

## combination of NSE and .list
x <- '{ "type": "LineString", "coordinates": [ [100.0, 0.0], [101.0, 1.0] ]}'
(y <- linestring(x))
props <- list(population = 1000, temperature = 89, size = 5)
y %>% feature() %>% properties_add(stuff = 4, .list = props)

# features to featurecollection
x <- '{ "type": "Point", "coordinates": [100.0, 0.0] }'
point(x) %>%
  feature() %>%
  featurecollection() %>%
  properties_add(population = 10)

# get property
x <- '{ "type": "LineString", "coordinates": [ [100.0, 0.0], [101.0, 1.0] ]}'
(y <- linestring(x))
x <- y %>% feature() %>% properties_add(population = 1000)
properties_get(x, property = 'population')
```

to_geojson

Convert GeoJSON character string to appropriate GeoJSON class

Description

Automatically detects and adds the class

Usage

```
to_geojson(x)
```

Arguments

x GeoJSON character string

Examples

```
mp <- '{"type":"MultiPoint","coordinates":[[100,0],[101,1]]}'  
to_geojson(mp)
```

```
ft <- '{"type":"Feature","properties":{"a":"b"},  
"geometry":{"type":"MultiPoint","coordinates": [ [100.0, 0.0], [101.0, 1.0] ]}}}'  
to_geojson(ft)
```

```
fc <- '{"type":"FeatureCollection","features":[{"type":"Feature","properties":{"a":"b"},  
"geometry":{"type":"MultiPoint","coordinates": [ [100.0, 0.0], [101.0, 1.0] ]}}]}'  
to_geojson(fc)
```


Index

*Topic **datasets**

geojson_data, 11

*Topic **package**

geojson-package, 2

as.geojson, 4

as.geojson, character-method
(as.geojson), 4

as.geojson, geojson-method (as.geojson),
4

as.geojson, json-method (as.geojson), 4

as.geojson, SpatialLines-method
(as.geojson), 4

as.geojson, SpatialLinesDataFrame-method
(as.geojson), 4

as.geojson, SpatialPoints-method
(as.geojson), 4

as.geojson, SpatialPointsDataFrame-method
(as.geojson), 4

as.geojson, SpatialPolygons-method
(as.geojson), 4

as.geojson, SpatialPolygonsDataFrame-method
(as.geojson), 4

bbox, 6

bbox_add, 3

bbox_add (bbox), 6

bbox_get, 3

bbox_get (bbox), 6

cat, 16

crs, 7

crs_add, 3

crs_add (crs), 7

crs_get, 3

crs_get (crs), 7

feature, 2, 8

featurecollection, 2, 9

from_geobuf, 3

from_geobuf (geobuf), 10

geo_bbox, 3, 6, 13

geo_pretty, 3, 14

geo_type, 3, 15

geo_write, 3, 16

geobuf, 10

geobuf2json, 10

geojson (geojson-package), 2

geojson-package, 2

geojson_data, 11

geojson_hint, 18

geojson_lint, 18

geojson_validate, 18

geometrycollection, 2, 12

json2geobuf, 10

linestring, 2, 17

linting_opts, 17

multilinestring, 2, 18

multipoint, 2, 19

multipolygon, 2, 20

point, 2, 21

polygon, 2, 21

prettify, 15

properties, 22

properties_add, 3

properties_add (properties), 22

properties_get, 3

properties_get (properties), 22

to_geobuf, 3

to_geobuf (geobuf), 10

to_geojson, 23

toJSON, 16