Package 'AtlasMaker'

<div align="center">July 17, 2023</div>

Title Make Multiple 'leaflet' Maps in 'Shiny'

Version 0.1.0

Description Simplify creating multiple, related 'leaflet' maps across tabs for a 'shiny' application. Users build lists of any polygons, points, and polylines needed for the project, use the map_server() function to assign built lists and other chosen aesthetics into each tab, and the package leverages modules to generate all map tabs.

License GPL (>= 3)

URL https://github.com/rachel-greenlee/AtlasMaker

BugReports https://github.com/rachel-greenlee/AtlasMaker/issues

Depends R (>= 3.5.0)

Imports leaflet, shiny

Suggests knitr, rmarkdown

VignetteBuilder knitr

Encoding UTF-8

RoxygenNote 7.2.3

LazyData true

LazyDataCompression xz

NeedsCompilation no

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Repository CRAN

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R topics documented:

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amphibians   *amphibians*

Description

Derived from data.ny.gov biodiversity data by county, filtered for amphibians only and combined with counties_NY Census-sourced data.

Format

A spatial data frame with 62 county entries:

STATEP state's code

NAME county name

INTPLAT latitude

INTPTLON longitude

ALAND area of land, in square meters

AWATER area of water, in square meters

Taxonomic.Group For animals and plants, the taxonomic phylum, class, or order to which the species belongs.

fill_value count of species from amphibians taxonomic grouped by county ...

Source

https://data.ny.gov/Energy-Environment/Biodiversity-by-County-Distribution-of-Animals-Pla/tk82-7km5

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birds	*birds*

Description

Derived from data.ny.gov biodiversity data by county, filtered for birds only.

Format

A spatial data frame with 62 county entries:

STATEP state's code

NAME county name

INTPLAT latitude

INTPTLON longitude

ALAND area of land, in square meters

AWATER area of water, in square meters

Taxonomic.Group For animals and plants, the taxonomic phylum, class, or order to which the species belongs.

fill_value count of species from birds taxonomic group by county ...

Source

https://data.ny.gov/Energy-Environment/Biodiversity-by-County-Distribution-of-Animals-Pla/tk82-7km5

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counties_NY	*counties_NY*

Description

US Census polygon data for New York state counties accessed through the `tigris` R Package.

Format

A spatial data frame with 62 rows and 7 variables:

STATEP state's code

NAME county name

INTPLAT latitude

INTPTLON longitude

ALAND area of land, in square meters

AWATER area of water, in square meters

geometry polygon information ...

Source

https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html

---

flowering_plants   *flowering_plants*

Description

Derived from data.ny.gov biodiversity data by county, filtered for flowering plants only.

Format

A spatial data frame with 62 county entries:

STATEP state's code

NAME county name

INTPLAT latitude

INTPTLON longitude

ALAND area of land, in square meters

AWATER area of water, in square meters

Taxonomic.Group For animals and plants, the taxonomic phylum, class, or order to which the species belongs.

fill_value count of species from flowering plants taxonomic group by county ...

Source

https://data.ny.gov/Energy-Environment/Biodiversity-by-County-Distribution-of-Animals-Pla/tk82-7km5

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map_server   *The Shiny server module for AtlasMaker.*

Description

This is the core ui and server function for AtlasMaker where users pass in the spatial-data based lists and aesthetic choices for each map tab.

Usage

```
map_server(
  id,
  polygons = NULL,
  polygon_legend_title = NULL,
  points = NULL,
  polylines = NULL,
  center = NULL,
  min_zoom = 7,
  map_base_theme = "Stamen.Terrain",
  poly_palette = "BuPu",
  point_color = "black",
  polyline_color = "gray"
)
```

Arguments

id	identifier for the map. This must match the id used in [map_UI()]().
polygons	polygon data in geospatial format.
polygon_legend_title	
	title to display on legend for polygon shading
points	point data with label, lat, and long variables.
polylines	polyline data in geospatial format.
center	lat/long of where to center the default map.
min_zoom	minimum zoom level users can see, default 7.
map_base_theme	Leaflet-compatible theme for base map.
poly_palette	Leaflet-compatible color palette for polygon shading.
point_color	Leaflet-compatible single color for point colors.
polyline_color	Leaflet-compatible single color for polyline colors.

Value

a list of parameters, including spatial data, that are passed into the AtlasMaker module that builds a single map tab.

Examples

```
server <- function(input, output) {
map_server(id = map2,
           polygons = watersheds,
           polygon_legend_title = "Watershed",
           points = farms,
           polylines = rivers,
           point_color = 'red',
           polyline_color = 'black')
           }
```

---

map_UI   *The user interface for AtlasMaker.*

Description

This is the core ui function for AtlasMaker.

Usage

```
map_UI(id)
```

Arguments

id   identifier for the map. This must match the id used in map_server().

Value

a leaflet::leafletOutput() object.

Examples

```
map_UI('flowering_plants')
map_UI('map1')
map_UI('map2')
```

---

points   *points*

Description

Takes user defined data for points in demo1 Default is NULL or empty

Format

A function with arguments x, ...:

x user data ...

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points_campgrounds   *points_campgrounds*

Description

Data on campgrounds in and outside of the Adirondacks in New York. For this package demo two data files were combined and only three columns were retained.

Format

A data frame with 116 rows and 3 variables:

label name of the campground

long longitude value

lat latitude value ...

Source

https://data.ny.gov/Recreation/Campgrounds-by-County-Within-Adirondack-Catskill-F/tnqf-vydw

https://data.ny.gov/Recreation/Campgrounds-by-County-Outside-Adirondack-Catskill-/5zxz-z3ci

---

points_parks   *points_parks*

Description

Data on state parks in New York. For this package demo only three columns were retained.

Format

A data frame with 254 rows and 3 variables:

label name of state park

long longitude value

lat latitude value ...

Source

https://data.ny.gov/Recreation/Watchable-Wildlife-Sites/hg7a-5ssi

---

points_watchsites   *points_watchsites*

Description

Data originally from data.ny.gov, for this package demo only three columns were retained.

Format

A data frame with 76 rows and 3 variables:

label name of watchsite location

long longitude value

lat latitude value ...

Source

<https://data.ny.gov/Recreation/Watchable-Wildlife-Sites/hg7a-5ssi>

---

reptiles   *reptiles*

Description

Derived from data.ny.gov biodiversity data by county, filtered for reptiles only.

Format

A spatial data frame with 62 county entries:

STATEP state's code

NAME county name

INTPLAT latitude

INTPTLON longitude

ALAND area of land, in square meters

AWATER area of water, in square meters

Taxonomic.Group For animals and plants, the taxonomic phylum, class, or order to which the species belongs.

fill_value count of species from reptiles taxonomic group by county ...

Source

<https://data.ny.gov/Energy-Environment/Biodiversity-by-County-Distribution-of-Animals-Pla/tk82-7km5>

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roads_ny_interstate *roads_ny_interstate*

Description

US Census polyline data for New York state interstates accessed through the `tigris` R Package.

Format

A data frame with 245 rows and 5 variables:

LINEARID unique identifier

FULLNAME interstate name

RTTYP route type

MTFCC US Census feature class code

geometry polyline information ...

---

shiny_AtlasMaker *Run a the AtlasMaker Shiny Demo*

Description

Run a the AtlasMaker Shiny Demo

Usage

```
shiny_AtlasMaker(app = c("demo1"))
```

Arguments

app   defaults to demo1

Value

Demo of AtlasMaker, a Shiny app that displays 4 tabs of Leaflet maps. See package vignette for code.

Index