Package: csmaps (via r-universe)

August 31, 2024

Title Preformatted Maps of Norway that Don't Need Geolibraries

Version 2023.5.25

Description Provides datasets containing preformatted maps of Norway at the county, municipality, and ward (Oslo only) level for redistricting in 2024, 2020, 2018, and 2017. Multiple layouts are provided (normal, split, and with an insert for Oslo), allowing the user to rapidly create choropleth maps of Norway without any geolibraries.

Depends R (>= 3.5.0)

License MIT + file LICENSE

URL https://www.csids.no/csmaps/, https://github.com/csids/csmaps

BugReports https://github.com/csids/csmaps/issues

LazyData true

Imports data.table, ggplot2, utils

Suggests testthat, knitr, rmarkdown, magrittr, ggrepel, leaflet, sf, csdata (>= 2023.5.22)

RoxygenNote 7.2.3

VignetteBuilder knitr

Encoding UTF-8

LazyDataCompression xz

Repository https://csids.r-universe.dev

RemoteUrl https://github.com/csids/csmaps

RemoteRef HEAD

RemoteSha 4818307466764e078b9d753f64048392038f7e48

Contents

`nor_county_map_bxxxx_default_dt`

Maps of Norwegian counties in data.table format

Description

We conveniently package map datasets for Norwegian counties (taken from Geonorge) that can be used in ggplot2 without needing any geo libraries. This data is licensed under Creative Commons BY 4.0 (CC BY 4.0).

Usage

```
nor_county_map_b2024_default_dt

nor_county_map_b2020_default_dt

nor_county_map_b2019_default_dt

nor_county_map_b2017_default_dt

nor_county_position_geolabels_b2024_default_dt

nor_county_position_geolabels_b2020_default_dt

nor_county_position_geolabels_b2019_default_dt

nor_county_position_geolabels_b2017_default_dt
```

Format

long Location code.

lat Location name.

order The order that this line should be plotted in.

group Needs to be used as 'group' aesthetic in ggplot2.

location_code Location code (municipality code).

An object of class `data.table` (inherits from `data.frame`) with 4479 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 4722 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 4531 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 15 rows and 4 columns.

An object of class `data.table` (inherits from `data.frame`) with 11 rows and 4 columns.

An object of class `data.table` (inherits from `data.frame`) with 18 rows and 4 columns.

An object of class `data.table` (inherits from `data.frame`) with 19 rows and 4 columns.

Details

Borders for 2024, 2020, 2019, and 2017 are provided.

Examples

```
# 2024 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_county_map_b2024_default_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2020 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_county_map_b2020_default_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2019 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_county_map_b2019_default_dt,
  mapping = aes(group = group),
  color = "black",
```

```
  fill = "white",
  linewidth = 0.4
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2017 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_county_map_b2017_default_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + theme_void()
q <- q + coord_quickmap()
q
```

`nor_county_map_bxxxx_default_sf`

Maps of Norwegian municipalities in sf format

Description

This data is licensed under Creative Commons BY 4.0 (CC BY 4.0).

Usage

```
nor_county_map_b2024_default_sf

nor_county_map_b2020_default_sf

nor_county_map_b2019_default_sf

nor_county_map_b2017_default_sf
```

Format

geometry Multipolygon

location_code Location code (municipality code).

An object of class `sf` (inherits from `data.frame`) with 11 rows and 2 columns.

An object of class `sf` (inherits from `data.frame`) with 18 rows and 2 columns.

An object of class `sf` (inherits from `data.frame`) with 19 rows and 2 columns.

Details

Borders for 2024, 2020, 2019, and 2017 are provided.

`nor_county_map_bxxxx_insert_oslo_dt`

Maps of Norwegian counties with an insert for Oslo in data.table format

---

Description

We conveniently package map datasets for Norwegian counties (taken from Geonorge) that can be used in ggplot2 without needing any geo libraries. This data is licensed under Creative Commons BY 4.0 (CC BY 4.0).

Usage

```
nor_county_map_b2024_insert_oslo_dt

nor_county_map_b2020_insert_oslo_dt

nor_county_map_b2019_insert_oslo_dt

nor_county_map_b2017_insert_oslo_dt

nor_county_position_geolabels_b2024_insert_oslo_dt

nor_county_position_geolabels_b2020_insert_oslo_dt

nor_county_position_geolabels_b2019_insert_oslo_dt

nor_county_position_geolabels_b2017_insert_oslo_dt
```

Format

long Location code.

lat Location name.

order The order that this line should be plotted in.

group Needs to be used as 'group' aesthetic in ggplot2.

location_code Location code (county code).

An object of class `data.table` (inherits from `data.frame`) with 4537 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 4780 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 4589 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 15 rows and 4 columns.

An object of class `data.table` (inherits from `data.frame`) with 11 rows and 4 columns.

An object of class `data.table` (inherits from `data.frame`) with 18 rows and 4 columns.

An object of class `data.table` (inherits from `data.frame`) with 19 rows and 4 columns.

Details

Borders for 2024, 2020, 2019, and 2017 are provided.

Examples

```
# 2024 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_county_map_b2024_insert_oslo_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + annotate(
  "text",
  x = csmaps::nor_xxx_position_title_insert_oslo_b2024_insert_oslo_dt$long,
  y = csmaps::nor_xxx_position_title_insert_oslo_b2024_insert_oslo_dt$lat,
  label = "Oslo"
)
q <- q + theme_void()
q <- q + coord_quickmap()
q


# 2020 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_county_map_b2020_insert_oslo_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + annotate(
  "text",
  x = csmaps::nor_xxx_position_title_insert_oslo_b2020_insert_oslo_dt$long,
  y = csmaps::nor_xxx_position_title_insert_oslo_b2020_insert_oslo_dt$lat,
  label = "Oslo"
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2019 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_county_map_b2019_insert_oslo_dt,
  mapping = aes(group = group),
```

```
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + annotate(
  "text",
  x = csmaps::nor_xxx_position_title_insert_oslo_b2019_insert_oslo_dt$long,
  y = csmaps::nor_xxx_position_title_insert_oslo_b2019_insert_oslo_dt$lat,
  label = "Oslo"
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2017 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_county_map_b2017_insert_oslo_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + annotate(
  "text",
  x = csmaps::nor_xxx_position_title_insert_oslo_b2017_insert_oslo_dt$long,
  y = csmaps::nor_xxx_position_title_insert_oslo_b2017_insert_oslo_dt$lat,
  label = "Oslo"
)
q <- q + theme_void()
q <- q + coord_quickmap()
q
```

`nor_county_map_bxxxx_split_dt` *Split map of Norwegian counties in data.table format*

Description

We conveniently package map datasets for Norwegian counties (taken from Geonorge) that can be used in ggplot2 without needing any geo libraries. This data is licensed under Creative Commons BY 4.0 (CC BY 4.0).

Usage

```
nor_county_map_b2024_split_dt

nor_county_map_b2020_split_dt
```

`nor_county_position_geolabels_b2024_split_dt`

`nor_county_position_geolabels_b2020_split_dt`

`annotate_oslo_nor_map_bxxxx_split_dt()`

Format

long Location code.

lat Location name.

order The order that this line should be plotted in.

group Needs to be used as 'group' aesthetic in ggplot2.

location_code Location code (municipality code).

An object of class `data.table` (inherits from `data.frame`) with 4537 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 15 rows and 4 columns.

An object of class `data.table` (inherits from `data.frame`) with 11 rows and 4 columns.

Details

Borders for 2024 and 2020 are provided.

Examples

```
# 2024 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + csmaps::annotate_oslo_nor_map_bxxxx_split_dt()
q <- q + geom_polygon(
  data = csmaps::nor_county_map_b2024_split_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2024 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + csmaps::annotate_oslo_nor_map_bxxxx_split_dt()
q <- q + geom_polygon(
  data = csmaps::nor_county_map_b2024_split_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
```

```
q <- q + ggrepel::geom_label_repel(
  data = csmaps::nor_county_position_geolabels_b2024_split_dt[repel==TRUE],
  mapping = aes(x = long, y = lat, label = location_code),
  size = 3,
  label.size = 0.1,
  label.r = grid::unit(0, "lines"),
  min.segment.length = 0
)
q <- q + geom_label(
  data = csmaps::nor_county_position_geolabels_b2024_split_dt[repel==FALSE],
  mapping = aes(x = long, y = lat, label = location_code),
  size = 3,
  label.size = 0.1,
  label.r = grid::unit(0, "lines")
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2020 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + csmaps::annotate_oslo_nor_map_bxxxx_split_dt()
q <- q + geom_polygon(
  data = csmaps::nor_county_map_b2020_split_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + theme_void()
q <- q + coord_quickmap()
q
```

`nor_municip_map_bxxxx_default_dt` *Maps of Norwegian municipalities in data.table format*

Description

We conveniently package map datasets for Norwegian municipalities (taken from Geonorge) that can be used in ggplot2 without needing any geo libraries. This data is licensed under Creative Commons BY 4.0 (CC BY 4.0).

Usage

```
nor_municip_map_b2024_default_dt

nor_municip_map_b2020_default_dt
```

`nor_municip_map_b2019_default_dt`

`nor_municip_position_geolabels_b2024_default_dt`

`nor_municip_position_geolabels_b2020_default_dt`

`nor_municip_position_geolabels_b2019_default_dt`

Format

long Location code.

lat Location name.

order The order that this line should be plotted in.

group Needs to be used as 'group' aesthetic in ggplot2.

location_code Location code (municipality code).

An object of class `data.table` (inherits from `data.frame`) with 30601 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 31705 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 356 rows and 3 columns.

An object of class `data.table` (inherits from `data.frame`) with 356 rows and 3 columns.

An object of class `data.table` (inherits from `data.frame`) with 422 rows and 3 columns.

Details

Borders for 2024, 2020, and 2019 are provided.

Examples

```
# 2024 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_municip_map_b2024_default_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.2
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2020 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_municip_map_b2020_default_dt,
  mapping = aes(group = group),
  color = "black",
```

```
  fill = "white",
  linewidth = 0.2
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2019 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_municip_map_b2019_default_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.2
)
q <- q + theme_void()
q <- q + coord_quickmap()
q
```

`nor_municip_map_bxxxx_default_sf`

Maps of Norwegian municipalities in sf format

Description

This data is licensed under Creative Commons BY 4.0 (CC BY 4.0).

Usage

```
nor_municip_map_b2024_default_sf

nor_municip_map_b2020_default_sf

nor_municip_map_b2019_default_sf
```

Format

geometry Multipolygon

location_code Location code (municipality code).

An object of class `sf` (inherits from `data.frame`) with 356 rows and 2 columns.

An object of class `sf` (inherits from `data.frame`) with 422 rows and 2 columns.

Details

Borders for 2024, 2020, and 2019 are provided.

`nor_municip_map_bxxxx_insert_oslo_dt` *Maps of Norwegian municipalities with an insert for Oslo in data.table format*

Description

We conveniently package map datasets for Norwegian municipalities (taken from Geonorge) that can be used in ggplot2 without needing any geo libraries. This data is licensed under Creative Commons BY 4.0 (CC BY 4.0).

Usage

```
nor_municip_map_b2024_insert_oslo_dt

nor_municip_map_b2020_insert_oslo_dt

nor_municip_map_b2019_insert_oslo_dt

nor_municip_position_geolabels_b2024_insert_oslo_dt

nor_municip_position_geolabels_b2020_insert_oslo_dt

nor_municip_position_geolabels_b2019_insert_oslo_dt
```

Format

long Location code.

lat Location name.

order The order that this line should be plotted in.

group Needs to be used as 'group' aesthetic in ggplot2.

location_code Location code (county code).

An object of class `data.table` (inherits from `data.frame`) with 30659 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 31763 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 356 rows and 3 columns.

An object of class `data.table` (inherits from `data.frame`) with 356 rows and 3 columns.

An object of class `data.table` (inherits from `data.frame`) with 422 rows and 3 columns.

Details

Borders for 2024, 2020, and 2019 are provided.

Examples

```
# 2024 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_municip_map_b2024_insert_oslo_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.2
)
q <- q + annotate(
  "text",
  x = csmaps::nor_xxx_position_title_insert_oslo_b2024_insert_oslo_dt$long,
  y = csmaps::nor_xxx_position_title_insert_oslo_b2024_insert_oslo_dt$lat,
  label = "Oslo"
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2020 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_municip_map_b2020_insert_oslo_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.2
)
q <- q + annotate(
  "text",
  x = csmaps::nor_xxx_position_title_insert_oslo_b2020_insert_oslo_dt$long,
  y = csmaps::nor_xxx_position_title_insert_oslo_b2020_insert_oslo_dt$lat,
  label = "Oslo"
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2019 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_municip_map_b2019_insert_oslo_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.2
)
q <- q + annotate(
```

```
  "text",
  x = csmaps::nor_xxx_position_title_insert_oslo_b2019_insert_oslo_dt$long,
  y = csmaps::nor_xxx_position_title_insert_oslo_b2019_insert_oslo_dt$lat,
  label = "Oslo"
)
q <- q + theme_void()
q <- q + coord_quickmap()
q
```

`nor_municip_map_bxxxx_split_dt` *Split map of Norwegian municipalities in data.table format*

Description

We conveniently package map datasets for Norwegian municipalities (taken from Geonorge) that can be used in ggplot2 without needing any geo libraries. This data is licensed under Creative Commons BY 4.0 (CC BY 4.0).

Usage

```
nor_municip_map_b2024_split_dt

nor_municip_map_b2020_split_dt
```

Format

long Location code.

lat Location name.

order The order that this line should be plotted in.

group Needs to be used as 'group' aesthetic in ggplot2.

location_code Location code (municipality code).

An object of class `data.table` (inherits from `data.frame`) with 30601 rows and 5 columns.

Details

Borders for 2024 and 2020 are provided.

Examples

```
# 2024 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_municip_map_b2024_split_dt,
  mapping = aes(group = group),
  color = "black",
```

```
  fill = "white",
  linewidth = 0.2
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2020 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_municip_map_b2020_split_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.2
)
q <- q + theme_void()
q <- q + coord_quickmap()
q
```

`nor_xxx_position_title_insert_oslo_b2024_insert_oslo_dt`
Position of a title for the Oslo insert

Description

Position of a title for the Oslo insert

Usage

```
nor_xxx_position_title_insert_oslo_b2024_insert_oslo_dt

nor_xxx_position_title_insert_oslo_b2020_insert_oslo_dt

nor_xxx_position_title_insert_oslo_b2019_insert_oslo_dt

nor_xxx_position_title_insert_oslo_b2017_insert_oslo_dt
```

Format

long Location code.

lat Location name.

An object of class `data.table` (inherits from `data.frame`) with 1 rows and 2 columns.

An object of class `data.table` (inherits from `data.frame`) with 1 rows and 2 columns.

An object of class `data.table` (inherits from `data.frame`) with 1 rows and 2 columns.

Examples

```
# 2020 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::nor_municip_map_b2020_insert_oslo_dt,
  mapping = aes(group = group),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + annotate(
  "text",
  x = csmaps::nor_xxx_position_title_insert_oslo_b2020_insert_oslo_dt$long,
  y = csmaps::nor_xxx_position_title_insert_oslo_b2020_insert_oslo_dt$lat,
  label = "Oslo"
)
q <- q + theme_void()
q <- q + coord_quickmap()
q
```

---

oslo_ward_map_bxxxx_default_dt

Map of Oslo wards (bydeler) in data.table format

Description

We conveniently package map datasets for Oslo wards (bydeler) (taken from Oslo municipality) that can be used in ggplot2 without needing any geo libraries. This data is licensed under Creative Commons BY 4.0 (CC BY 4.0).

Usage

```
oslo_ward_map_b2024_default_dt

oslo_ward_map_b2020_default_dt

oslo_ward_position_geolabels_b2024_default_dt

oslo_ward_position_geolabels_b2020_default_dt
```

Format

long Location code.

lat Location name.

order The order that this line should be plotted in.

group Needs to be used as 'group' aesthetic in ggplot2.

location_code Location code (ward code).

An object of class `data.table` (inherits from `data.frame`) with 1372 rows and 5 columns.

An object of class `data.table` (inherits from `data.frame`) with 15 rows and 3 columns.

An object of class `data.table` (inherits from `data.frame`) with 15 rows and 3 columns.

Details

Borders provided for 2024, 2020.

Examples

```
# 2024 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::oslo_ward_map_b2024_default_dt,
  mapping = aes(group = group, fill = location_code),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + geom_label(
  data = csmaps::oslo_ward_position_geolabels_b2024_default_dt,
  mapping = aes(label = location_code),
  color = "red"
)
q <- q + theme_void()
q <- q + coord_quickmap()
q

# 2020 borders
library(ggplot2)
q <- ggplot(mapping = aes(x = long, y = lat))
q <- q + geom_polygon(
  data = csmaps::oslo_ward_map_b2020_default_dt,
  mapping = aes(group = group, fill = location_code),
  color = "black",
  fill = "white",
  linewidth = 0.4
)
q <- q + geom_label(
  data = csmaps::oslo_ward_position_geolabels_b2020_default_dt,
  mapping = aes(label = location_code),
  color = "red"
)
q <- q + theme_void()
q <- q + coord_quickmap()
q
```

`oslo_ward_map_bxxxx_default_sf`

Map of Oslo wards (bydeler) in sf format

Description

This data is licensed under Creative Commons BY 4.0 (CC BY 4.0).

Usage

```
oslo_ward_map_b2020_default_sf

oslo_ward_map_b2024_default_sf
```

Format

geometry Multipolygon

location_code Location code (municipality code).

An object of class `sf` (inherits from `data.frame`) with 15 rows and 2 columns.

Details

Borders provided for 2024, 2020.

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