Package ‘gapminder’

October 31, 2017

Title Data from Gapminder
Version 0.3.0
Description An excerpt of the data available at Gapminder.org. For each of 142 countries, the package provides values for life expectancy, GDP per capita, and population, every five years, from 1952 to 2007.
Depends R (>= 3.1.0)
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R topics documented:
country_codes .......................................................... 2
country_colors ........................................................ 2
gapminder .............................................................. 4
gapminder_unfiltered ............................................. 5

Index 6
Description

Data frame of Gapminder country names and ISO 3166-1 country codes:

- **iso_alpha** The 3-letter ISO 3166-1 alpha-3 code.
- **iso_num** The 3-digit ISO 3166-1 numeric-3 code.

Also includes the countries covered by the supplemental data frame `gapminder_unfiltered`.

Usage

country_codes

Format

An object of class `tbl_df` (inherits from `tbl`, `data.frame`) with 187 rows and 3 columns.

Examples

```r
if (require("dplyr")) {
  gapminder %>%
    filter(year == 2007, country %in% c("Kenya", "Peru", "Syria")) %>%
    select(country, continent) %>%
    left_join(country_codes)
}
```

country_colors

Description

Color schemes for the countries and continents in the Gapminder data.

Usage

country_colors

Format

Named character vectors giving country and continent colors:

- **country_colors** colors for the 142 countries
- **continent_colors** colors for the 5 continents
country_colors

See Also
gapminder for a description of the dataset

Examples

# ggplot2 examples are below these base graphics examples!

# using country_colors with base graphics

# for convenience, integrate the country colors into the data.frame
gap_with_colors <- data.frame(gapminder,
cc = I(country_colors[match(gapminder$country, names(country_colors))]))

# bubble plot, focus just on Africa and Europe in 2007
keepers <- with(gap_with_colors,
continent %in% c("Africa", "Europe") & year == 2007)
plot(lifeExp ~ gdPPercap, gap_with_colors, subset = keepers, log = "x", pch = 21,
cex = sqrt(gap_with_colors$pop[keepers]/pi)/1500,
bg = gap_with_colors$cc[keepers])

if (require(ggplot2)) {

# with ggplot2, just provide country_colors to scale_color_manual():
# ... + scale_color_manual(values = country_colors) + ...

# simple line plot for 5 countries
h_countries <- c("Egypt", "Haiti", "Romania", "Thailand", "Venezuela")
h_dat <- droplevels(subset(gapminder, country %in% h_countries))
h_dat$country <- with(h_dat, reorder(country, lifeExp, max))
ggplot(h_dat, aes(x = year, y = lifeExp)) +
geom_line(aes(color = country)) +
scale_colour_manual(values = country_colors) +
guides(color = guide_legend(reverse = TRUE))

# spaghetti plot for lots of countries

ggplot(subset(gapminder, continent != "Oceania"),
aes(x = year, y = lifeExp, group = country, color = country)) +
geom_line(lwd = 1, show_guide = FALSE) + facet_wrap(~ continent) +
scale_color_manual(values = country_colors) +
theme_bw() + theme(strip.text = element_text(size = rel(1.1)))

# bubble plot for lots of countries
gap_bit <- subset(gapminder, year == 2007 & continent != "Oceania")
gap_bit <- gap_bit[with(gap_bit, order(continent, -1 * pop)), ]
ggplot(gap_bit, aes(x = gdPPercap, y = lifeExp, size = pop)) +
scale_x_log10(limits = c(150, 115000)) + ylim(c(16, 96)) +
geom_point(pch = 21, color = 'grey20', show_guide = FALSE) +
scale_size_area(max_size = 40) +
facet_wrap(~ continent) + coord_fixed(ratio = 1/43) +
Description

Excerpt of the Gapminder data on life expectancy, GDP per capita, and population by country.

Usage

gapminder

Format

The main data frame gapminder has 1704 rows and 6 variables:

- **country**: factor with 142 levels
- **continent**: factor with 5 levels
- **year**: ranges from 1952 to 2007 in increments of 5 years
- **lifeExp**: life expectancy at birth, in years
- **pop**: population
- **gdpPercap**: GDP per capita (US$, inflation-adjusted)

The supplemental data frame gapminder_unfiltered was not filtered on year or for complete data and has 3313 rows.

Source

http://www.gapminder.org/data/

See Also

country_colors for a nice color scheme for the countries

Examples

str(gapminder)
head(gapminder)
summary(gapminder)
table(gapminder$continent)
aggregate(lifeExp ~ continent, gapminder, median)
plot(lifeExp ~ year, gapminder, subset = country == "Cambodia", type = "b")
plot(lifeExp ~ gdpPercap, gapminder, subset = year == 2007, log = "x")
if (require("dplyr")) {
  gapminder %>%
    filter(year == 2007) %>%
    group_by(continent) %>%
    summarise(lifeExp = median(lifeExp))

  # how many unique countries does the data contain, by continent?
  gapminder %>%
    group_by(continent) %>%
    summarise(n_obs = n(), n_countries = n_distinct(country))

  # by continent, which country experienced the sharpest 5-year drop in
  # life expectancy and what was the drop?
  gapminder %>%
    group_by(continent, country) %>%
    select(country, year, continent, lifeExp) %>%
    mutate(le_delta = lifeExp - lag(lifeExp)) %>%
    summarize(worst_le_delta = min(le_delta, na.rm = TRUE)) %>%
    filter(min_rank(worst_le_delta) < 2) %>%
    arrange(worst_le_delta)
}

---

gapminder_unfiltered  

**Gapminder data, unfiltered.**

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**Description**

The supplemental data frame gapminder_unfiltered was not filtered on year or for complete data and has 3313 rows. Everything else is as documented in gapminder.

**Usage**

gapminder_unfiltered

**Format**

An object of class tbl_df (inherits from tbl, data.frame) with 3313 rows and 6 columns.
Index

*Topic datasets
  - country_codes, 2
  - country_colors, 2
  - gapminder, 4
  - gapminder_unfiltered, 5

continent_colors(country_colors), 2
country_codes, 2
country_colors, 2, 4

gapminder, 3, 4, 5
gapminder_unfiltered, 2, 4, 5