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Add-on Packages

Start of transcript. Skip to the end.

RAFAEL IRIZARRY: The power of ggplot2 is further

augmented thanks to the availability of add on packages.

The remaining changes required to put the finishing touches on our plot

requires the ggthemes and ggrepel packages.

Let's start by changing the themes.

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Textbook links

This video corresponds to the textbook section on add-on packages and the textbook section on putting it all together.

Key points

- The style of a ggplot graph can be changed using the `theme()` function.

- The **ggthemes** package adds additional themes.

- The **ggrepel** package includes a geometry that repels text labels, ensuring they do not overlap with each other: `geom_text_repel()`.

Code: Adding themes

```
# theme used for graphs in the textbook and course
library(dslabs)
ds_theme_set()

# themes from ggthemes
library(ggthemes)
p + theme_economist()    # style of the Economist magazine
p + theme_fivethirtyeight()    # style of the FiveThirtyEight website
```

Code: Putting it all together to assemble the plot

```r
# load libraries
library(tidyverse)
library(ggrepel)
library(ggthemes)
library(dslabs)
data(murders)

# define the intercept
r <- murders %>%
    summarize(rate = sum(total) / sum(population) * 10^6) %>%
    .$rate

# make the plot, combining all elements
murders %>%
    ggplot(aes(population/10^6, total, label = abb)) +
    geom_abline(intercept = log10(r), lty = 2, color = "darkgrey") +
    geom_point(aes(col = region), size = 3) +
    geom_text_repel() +
    scale_x_log10() +
    scale_y_log10() +
    xlab("Population in millions (log scale)") +
    ylab("Total number of murders (log scale)") +
    ggtitle("US Gun Murders in 2010") +
    scale_color_discrete(name = "Region") +
    theme_economist()
```

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