

Data Visualization for Political Scientists

Session 5 - General Tips and Next Steps

Felix Haass

15 Januar 2018

Saving your ggplot2 plots

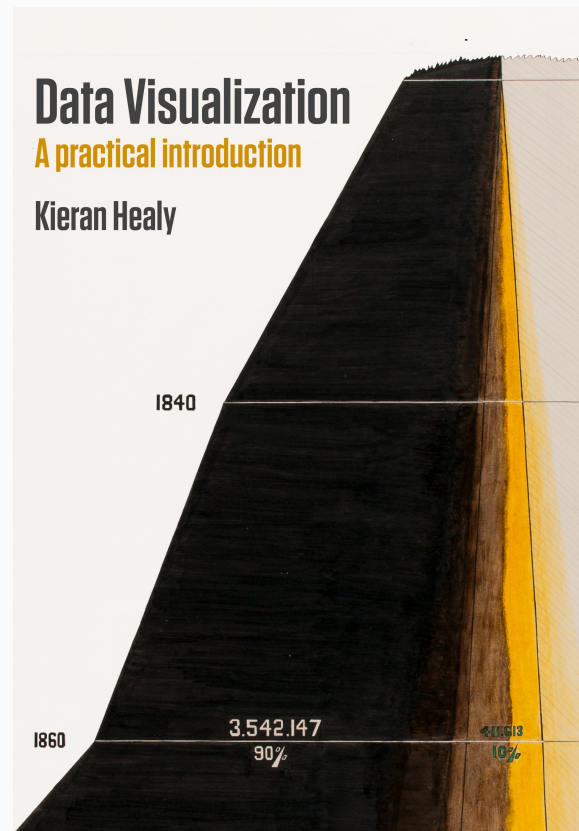
We use the `ggsave()` function to export plots in any format we like. Simply include the `ggsave()` call after your ggplot2 building blocks, using variations of the following options



Where To Find Help

Data Visualization - A practical introduction

by Kieran Healy (forthcoming Princeton University Press)



Where To Find Help

StackOverflow

Tip: include the term "stack" and "ggplot" in your google query terms

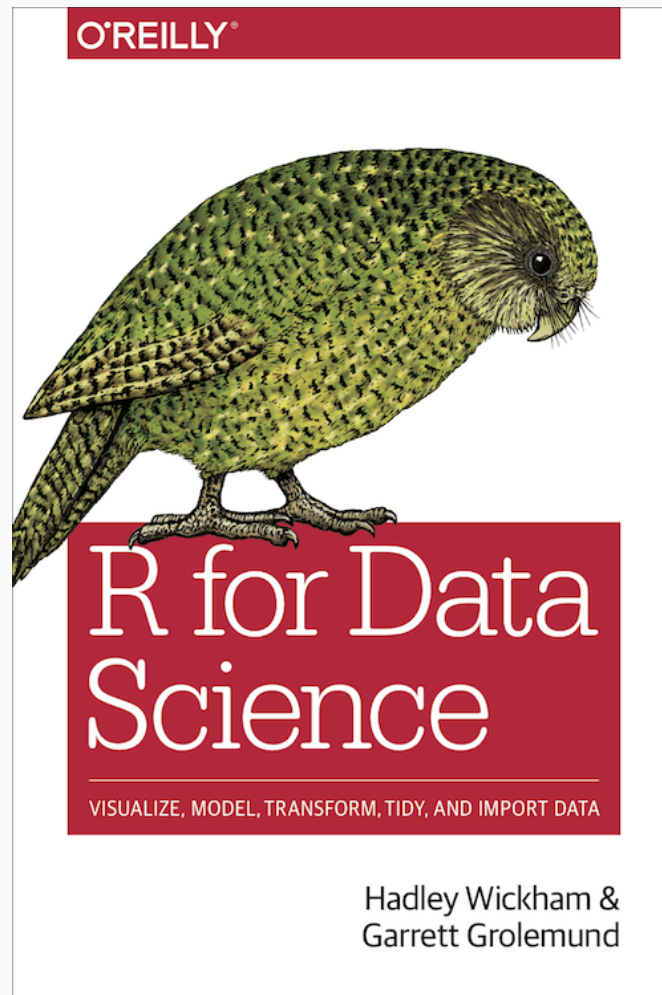
The screenshot shows the Stack Overflow search results for the tag 'ggplot2'. At the top, there's a navigation bar with 'Questions', 'Developer Jobs', 'Tags', and 'Users'. A search bar contains the text '[ggplot2]'. Below the navigation bar, there's a banner for 'It's back! Take the 2018 Developer Survey today'. The main content area is titled 'Tagged Questions' and includes filters for 'info', 'newest', 'frequent', 'votes', 'active', and 'unanswered'. A description of the 'ggplot2' tag is provided, stating it's an actively maintained open-source chart-drawing package for R. Below this, three questions are listed:

- 1** vote, **1** answer, 38 views: **ggplot number of points according to x value**. The question asks for help with a data frame summarization. Asked 3 hours ago by JasonBaik (39 ● 7).
- 1** vote, **0** answers, 23 views: **R grid : 'grob' path must contain at least one name 'grob'**. The question reports an error with the 'library(grid)' package. Asked 3 hours ago by Grzegorz Ky (17 ● 3).
- 0** votes, **2** answers, 32 views: **How to color only some specific lines among many using ggplot in r?**. The question asks for help with coloring lines in a trajectory plot. Asked 16 hours ago by da Silva (1 ● 1).

On the right side, there's a summary for the 'ggplot2' tag: '20,167 questions tagged', 'Ask Question' button, and 'BLOG' section with featured posts like 'The Brutal Lifecycle of JavaScript Frameworks' and '2018 monthly product team updates'. There's also a 'Favorite Tags' section showing 'r' and 'ggplot', and a 'Related Tags' section showing 'r' (19878) and 'plot' (2438).

Where To Find Help

R for Data Science



Where To Find Help

#rstats Twitter hashtag



Cheatsheets

The image shows a screenshot of the RStudio interface. The 'Help' menu is open, and the 'Cheatsheets' option is selected, which has opened a sub-menu. The sub-menu contains the following items:

- RStudio IDE Cheat Sheet
- Data Transformation with dplyr
- Data Visualization with ggplot2
- Package Development with devtools
- Web Applications with shiny
- Interfacing Spark with sparklyr
- R Markdown Cheat Sheet
- R Markdown Reference Guide

The main editor window shows R Markdown code for a slide. The code includes a title, a list of general tips, and R code for a plot. The console window shows the execution of the R code.






```
thon</a> users more likely to get into Slyther  
href="https://t.co/zvC0st6V4f">https://t.co/zvC0st6V4f">pic.twitter.com/  
Maëlle Salmon ??? (@ma_salmon) <a  
href="https://twitter.com/ma_salmon/status/948  
tfw">2. Januar 2018</a></blockquote>  
98  
99 </div>  
100  
101 ---  
102  
103 # Cheatsheets  
104 |  
105 |  
106 |  
107 ---  
108  
109 # General Tips  
110  
111 - Press <kbd>Tab</kbd> to autocomplete!  
112 - Use keyboard shortcuts  
105:1 # Cheatsheets - R Markdown
```

```
> rwnda_plot  
> library(ggprel)  
>  
> rwnda_plot <- ggplot(gapminder_africa,  
+ aes(x = year, y = lifeExp)) +  
+ geom_point() +  
+ geom_line(aes(group = country)) +  
+ geom_label_repel(data = min_lifeexp,  
+ aes(label = country))  
>  
>  
> rwnda_plot
```

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General Tips

- Press **Tab** to autocomplete!
- Use keyboard shortcuts
 - **Strg/Ctrl + Shift + M** for 
 - **Alt + -** for 
 - **Shift + 1/2/3** switches between RStudio panes
- Name things often & understandably (e.g. not  but )
 - Follow a style guide
- Use comments  often and judiciously
 - Comment out several lines of code with **Strg/Ctrl + Shift + c**
- Look for package vignettes on Google

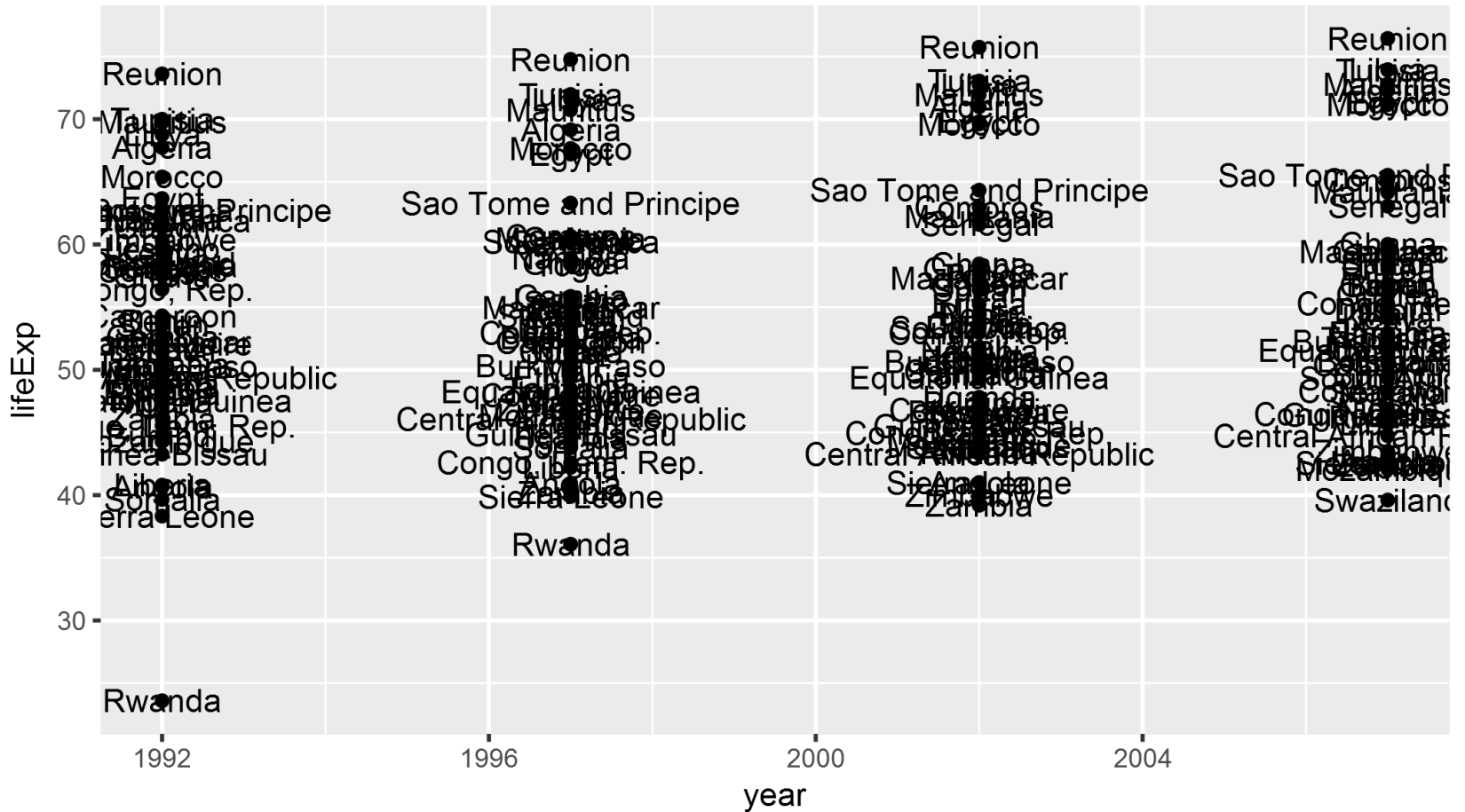
Questions?

Labels and Text

`text` is useful for simple text display; `textgrob` from the `textgrob` package has more advanced functions.



Labels and Text

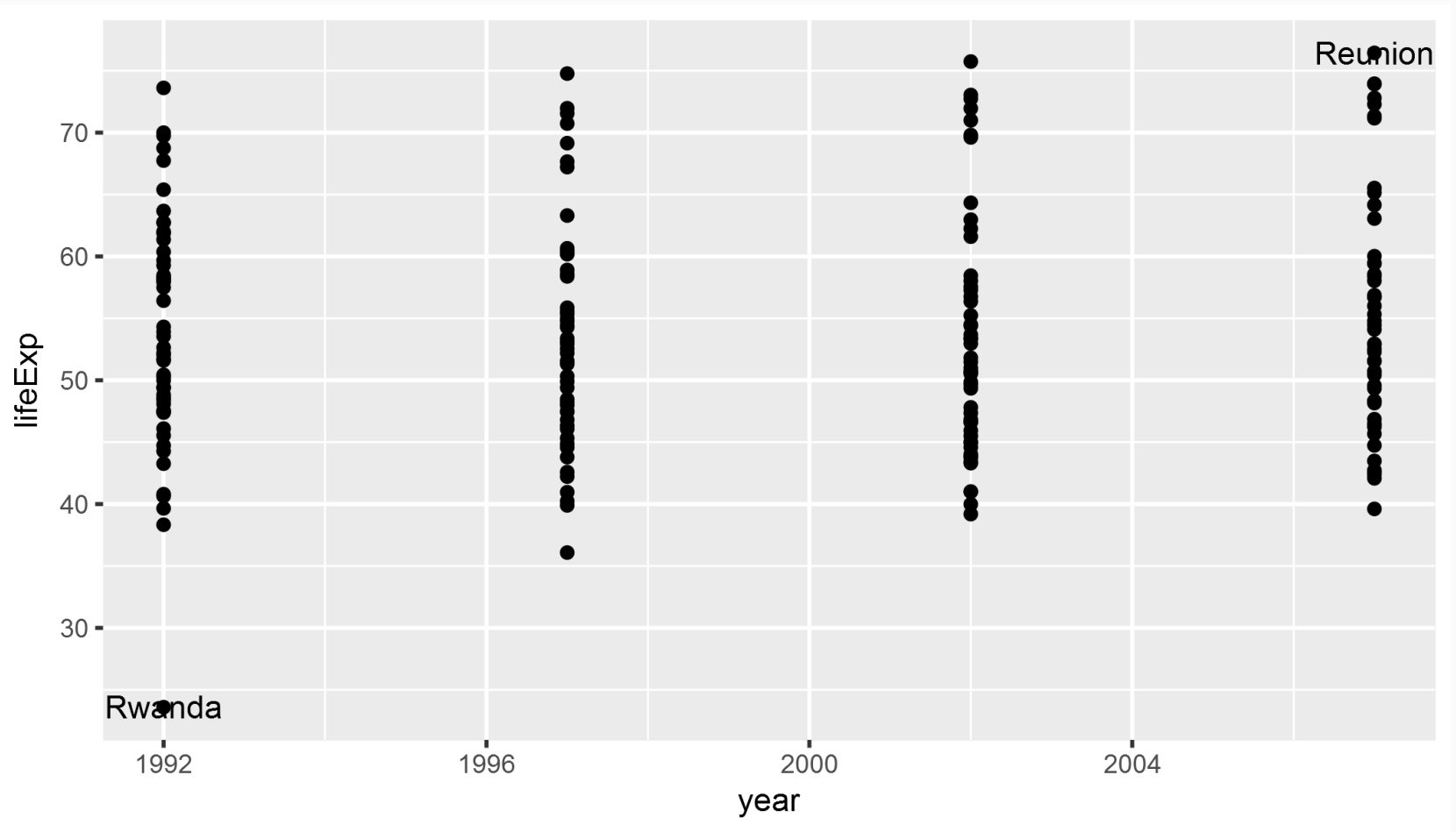


Labels and Text: Subset data first!

It often makes sense to create a separate data frame with the labels you want to you plot.



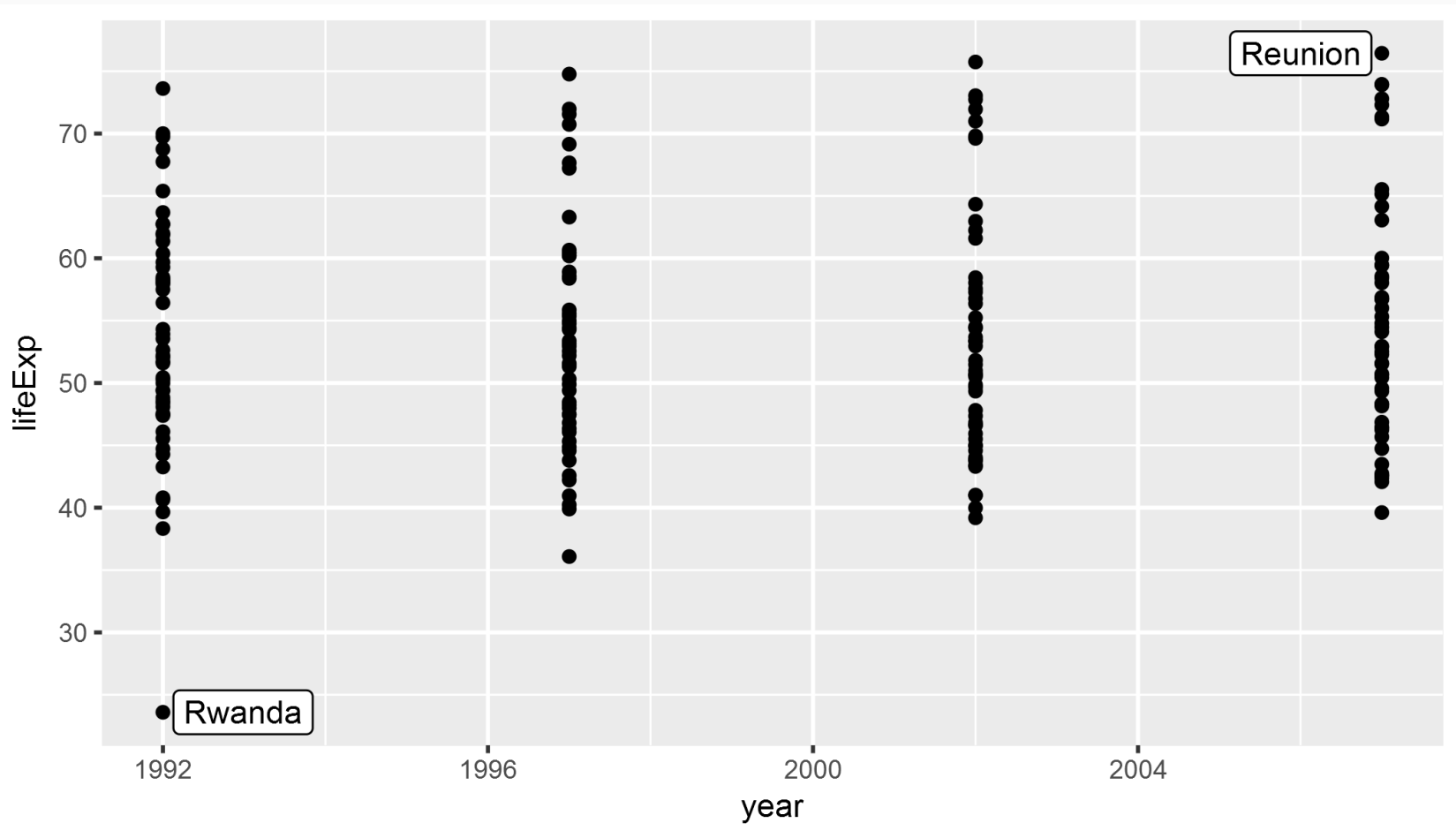
Labels and Text: Subset data first!



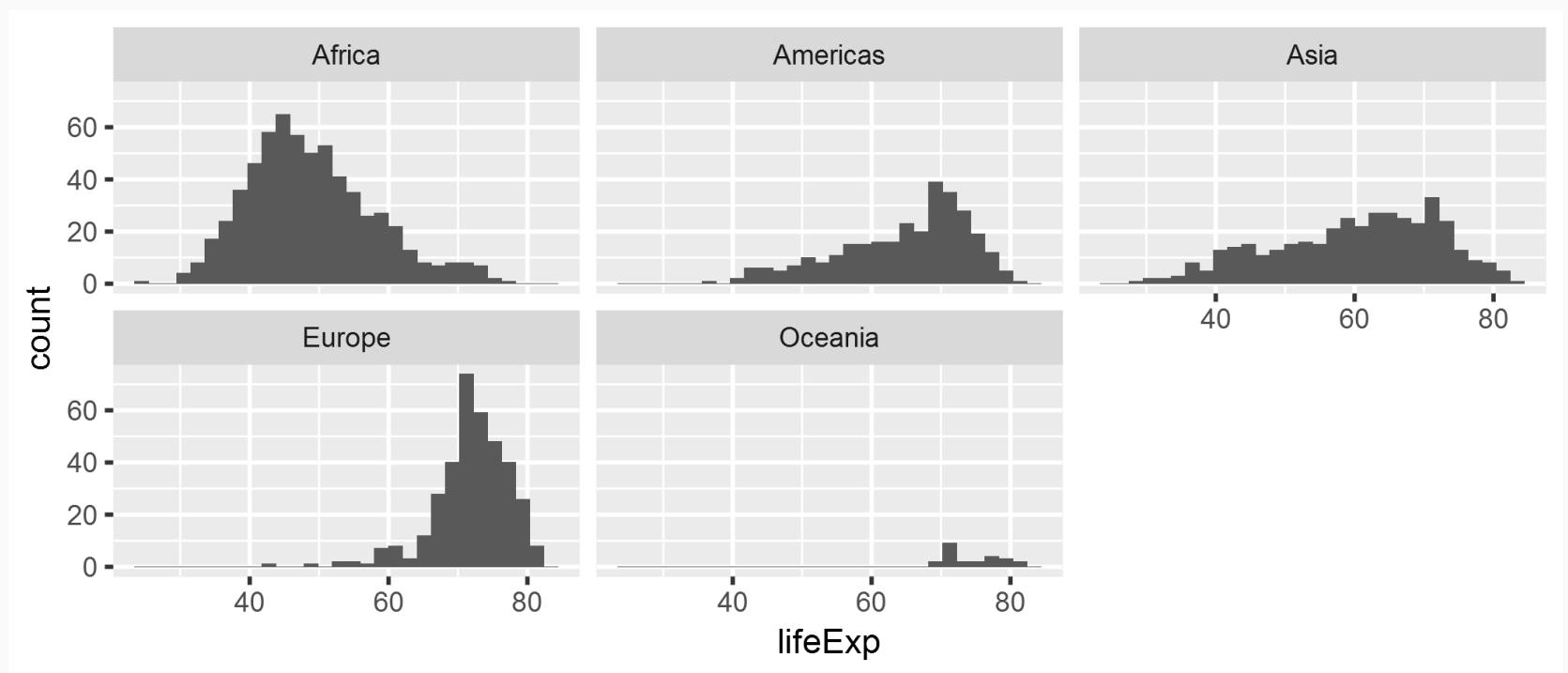
Labels and Text: ggrepel



Labels and Text: ggrepel



Histograms and variable distributions



Additional exercises

1. Plot a scatterplot of the relationship between [] and [] and adjust the point size to population.
2. Install the [] package to access World Bank data. Use the help function [] to find out how the package's main function [] works. Download data for GDP (indicator: []) and corruption (indicator []). Try to plot the two variables for all countries in the world.