

Advanced Data Visualization with ggplot2: Exercises

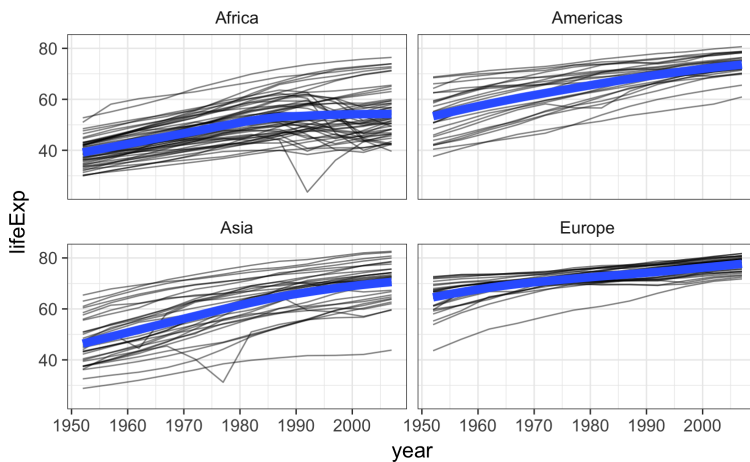
Exercise set 1

Re-create this same plot from scratch without saving anything to a variable. That is, start from the `ggplot` call.

- Start with the `ggplot()` function using the `gm` data.
- Create an aesthetic mapping of `gdpPercap` to the x-axis and `lifeExp` to the y-axis.
- Add points to the plot: Make the points size 3 and map continent onto the aesthetics of the point
- Use a log10 scale for the x-axis.

Exercise set 2

1. Make a scatter plot of `lifeExp` on the y-axis against `year` on the x.
2. Make a series of small multiples faceting on continent.
3. Add a fitted curve, smooth or `lm`, with and without facets.
4. **Bonus:** using `geom_line()` and aesthetic mapping `country` to `group=`, make a “spaghetti plot”, showing *semitransparent* lines connected for each country, faceted by continent. Add a smoothed loess curve with a thick (`lwd=3`) line with no standard error stripe. Reduce the opacity (`alpha=`) of the individual black lines. *Don't* show Oceania countries (that is, `filter()` the data where `continent!="Oceania"` before you plot it).



Exercise set 3

1. Make a jittered strip plot of GDP per capita against continent.
2. Make a box plot of GDP per capita against continent.
3. Using a log10 y-axis scale, overlay semitransparent jittered points on top of box plots, where outlying points are colored.
4. **BONUS:** Try to reorder the continents on the x-axis by GDP per capita. Why isn't this working as expected? See `?reorder` for clues.

Exercise set 4

1. Plot a histogram of GDP Per Capita.
2. Do the same but use a log10 x-axis.
3. Still on the log10 x-axis scale, try a density plot mapping continent to the fill of each density distribution, and reduce the opacity.
4. Still on the log10 x-axis scale, make a histogram faceted by continent *and* filled by continent. Facet with a single column (see `?facet_wrap` for help).
5. Save this figure to a 6x10 PDF file.