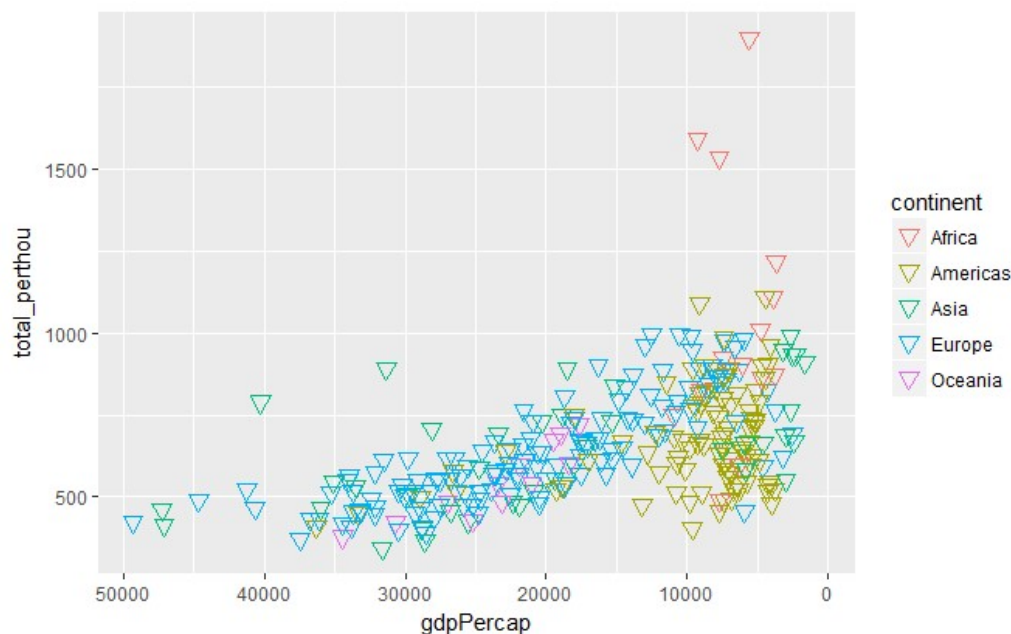


Data Visualization with ggplot2

Exercise set 1

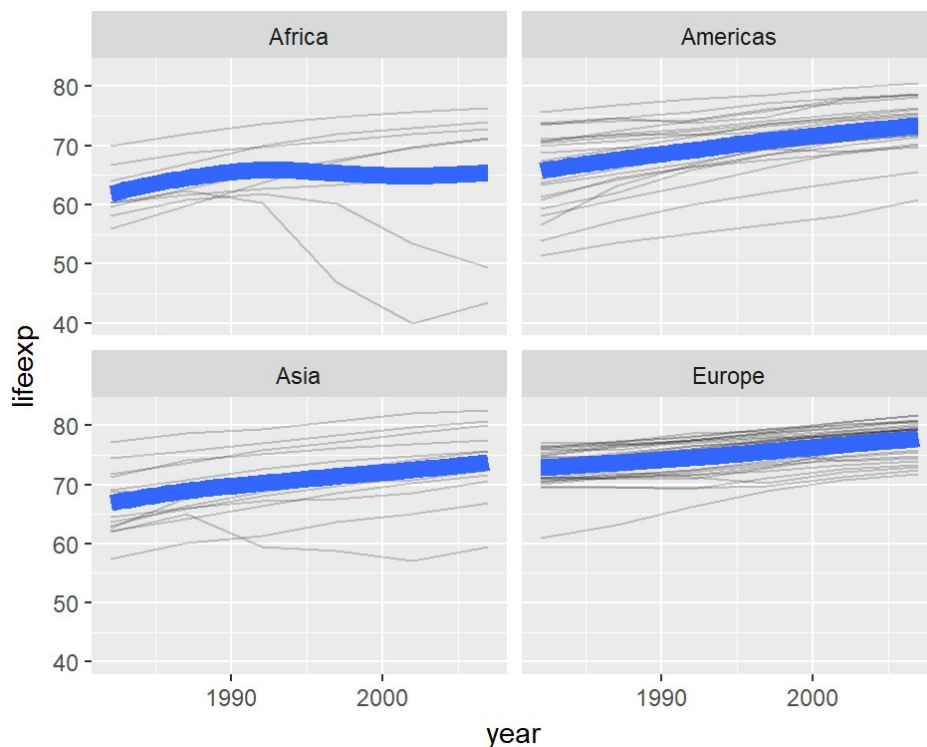
Re-create the plot below:



- Start with the `ggplot()` function using the `gm` data.
- Create an aesthetic mapping of `gdpPerCap` to the x-axis and `total_perthou` to the y-axis.
- Add points to the plot: Make the points size 3, use `"pch = 25"`, and map `continent` onto the aesthetics of the point
- Use a `scale_x_reverse` 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 \log_{10} 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 \log_{10} x-axis.
3. Still on the \log_{10} x-axis scale, try a density plot mapping continent to the fill of each density distribution, and reduce the opacity.
4. Still on the \log_{10} 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.