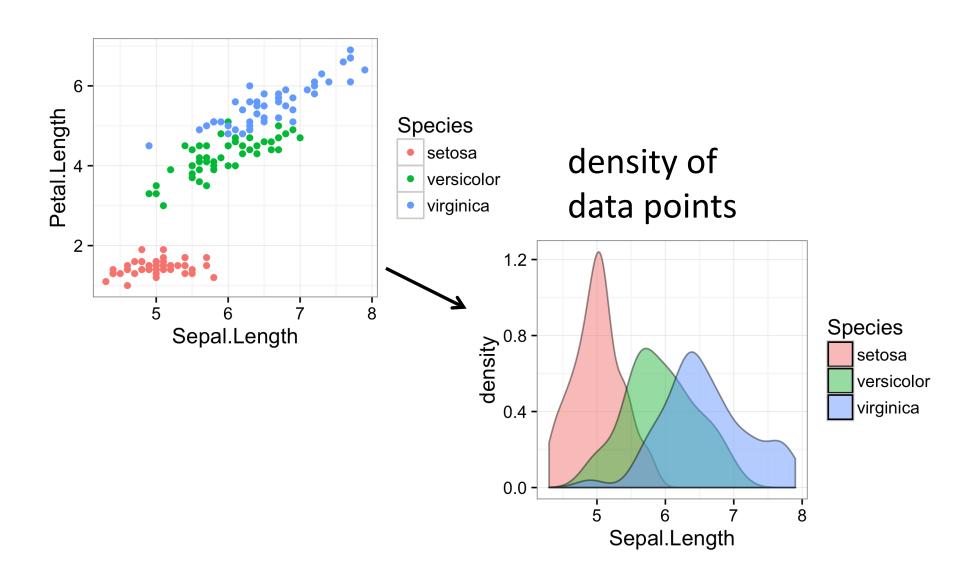
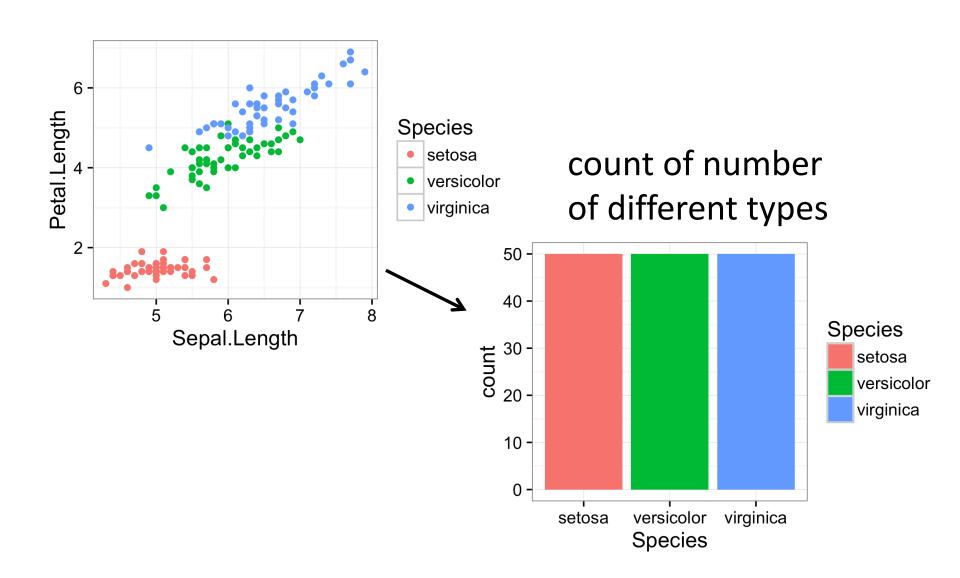
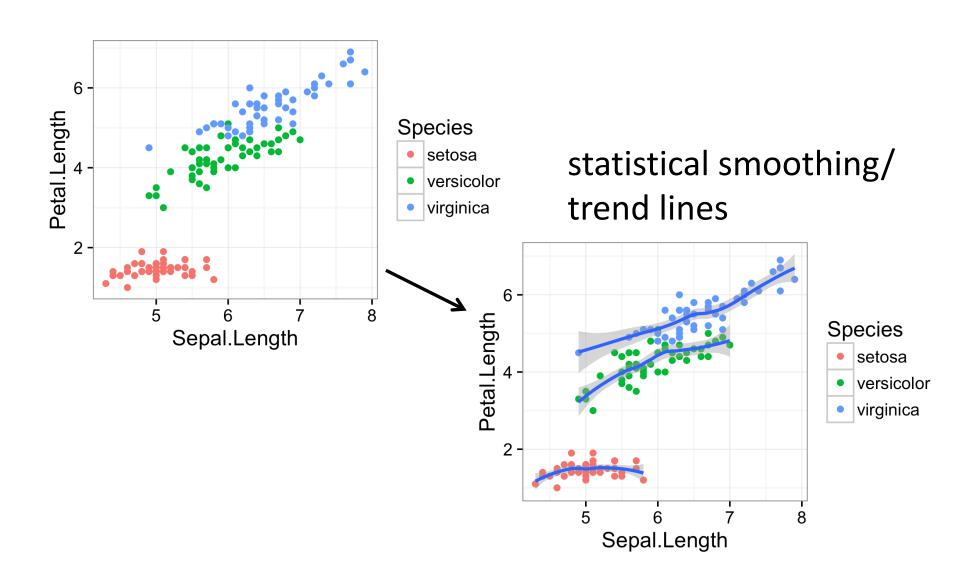
We often need to do statistical transformations before plotting



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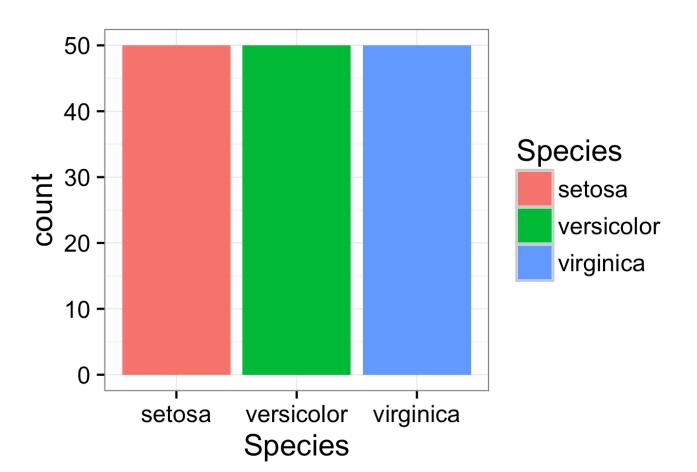
In ggplot2, these transformations are done with stats

- stat_ecdf
 Empirical Cumulative Density Function
- stat_ellipse
 Plot data ellipses.
- stat_function
 Superimpose a function.
- stat_identity Identity statistic.
- stat_qq (geom_qq)
 Calculation for quantile-quantile plot.
- stat_summary_2d (stat_summary2d, stat_summary_hex)
 Bin and summarise in 2d (rectangle & hexagons)
- stat_unique
 Remove duplicates.

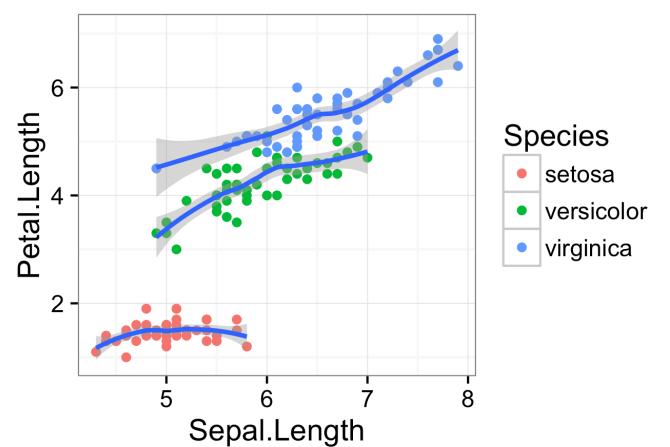




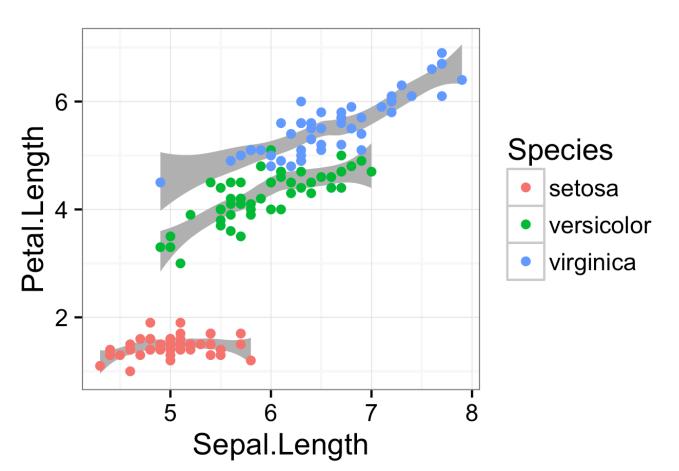
In most cases we just need to call the appropriate geom and it calls a stat



In most cases we just need to call the appropriate geom and it calls a stat



However, sometimes it can be helpful to call the stat directly



Scales define how to map data onto aesthetics

- scale_colour_grey (scale_color_grey, scale_fill_grey)
 Sequential grey colour scale.
- scale_colour_hue (scale_color_discrete, scale_color_hue, scale_colour_discrete, scale_fill_discrete, scale_fill_hue)
 Qualitative colour scale with evenly spaced hues.
- scale_identity (scale_alpha_identity, scale_color_identity, scale_colour_identity, scale_fill_identity, scale_linetype_identity, scale_shape_identity, scale_size_identity)
 Use values without scaling.
- scale_manual (scale_alpha_manual, scale_color_manual, scale_colour_manual, scale_fill_manual, scale_linetype_manual, scale_shape_manual, scale_size_manual)
 Create your own discrete scale.
- scale_linetype (scale_linetype_continuous, scale_linetype_discrete)
 Scale for line patterns.
- scale_shape (scale_shape_continuous, scale_shape_discrete)
 Scale for shapes, aka glyphs.
- scale_size (scale_radius, scale_size_area, scale_size_continuous,





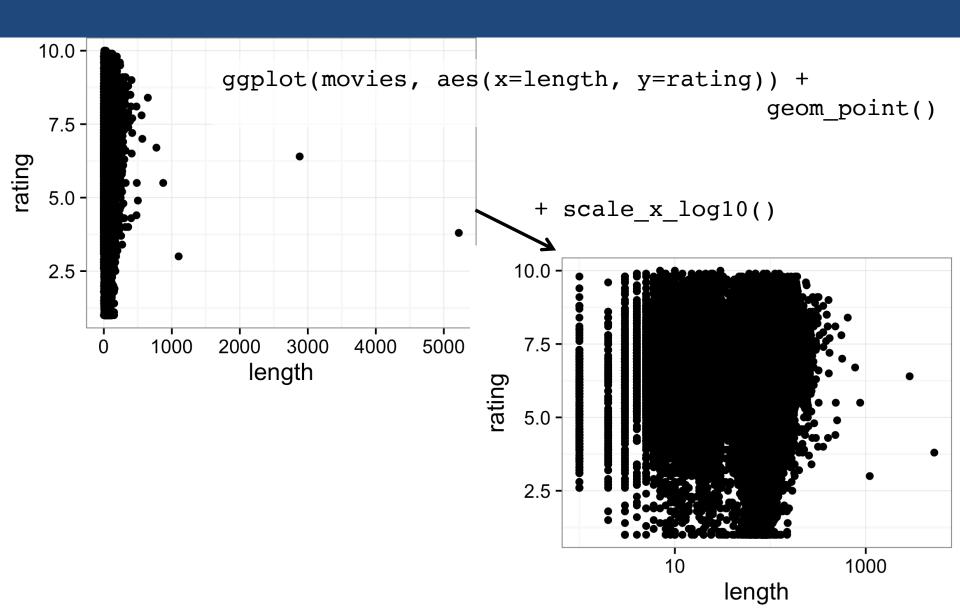
DIY



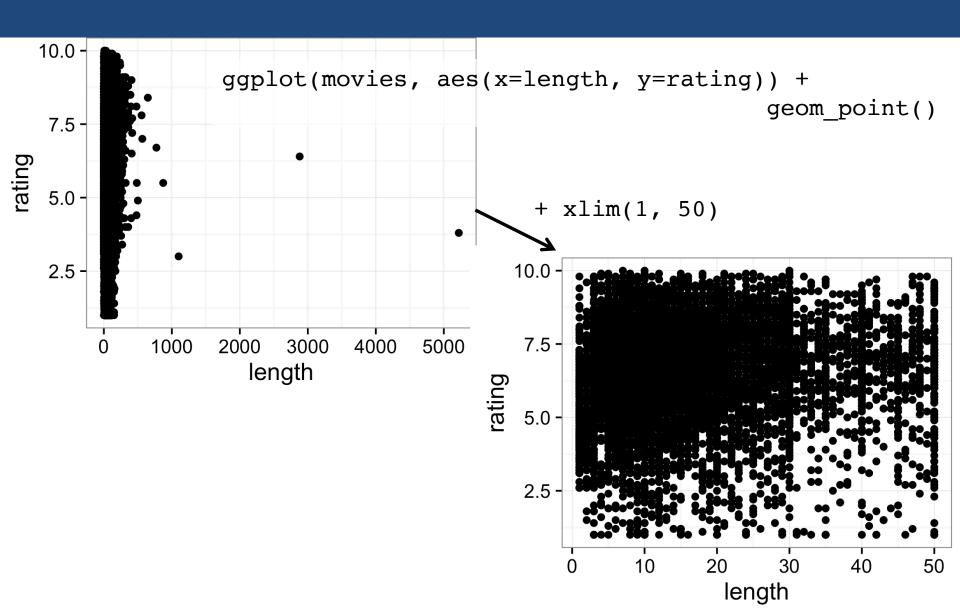




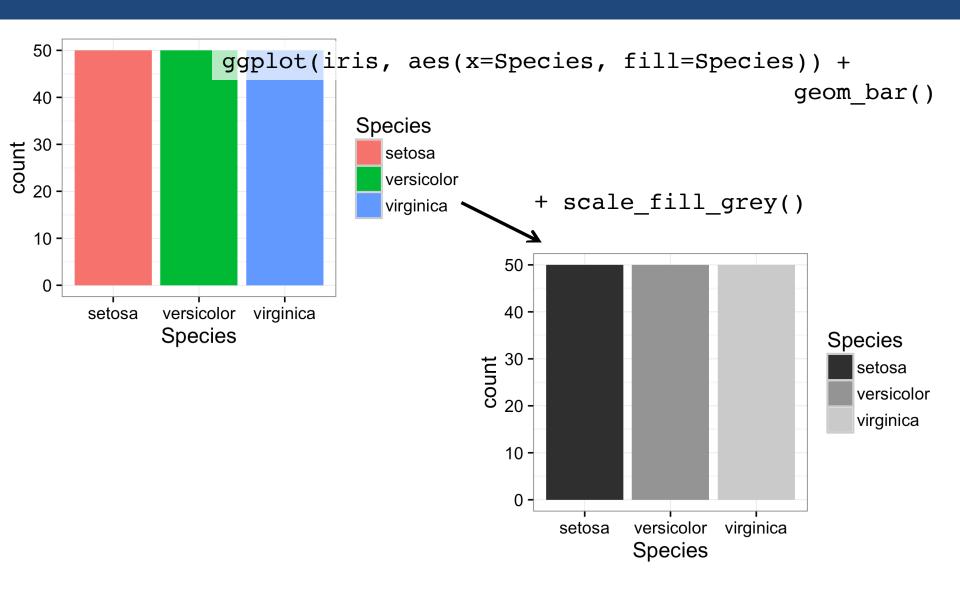
Example 1: Change scaling of x axis



Example 1: Change scaling of x axis



Example 2: Change color scaling



Example 2: Change color scaling

