Lecture 21 – ggplot hacks

ggplot2 as part of the tidyverse

- `ggplot2` is a package for data visualization in the tidyverse, a suite of packages in *R* designed to aid in reading, analyzing, and visualizing data

  https://www.tidyverse.org/

- There are many package extensions of `ggplot2`, those that are considered compatible and using the same structure as other packages in the tidyverse.

  https://exts.ggplot2.tidyverse.org/gallery/
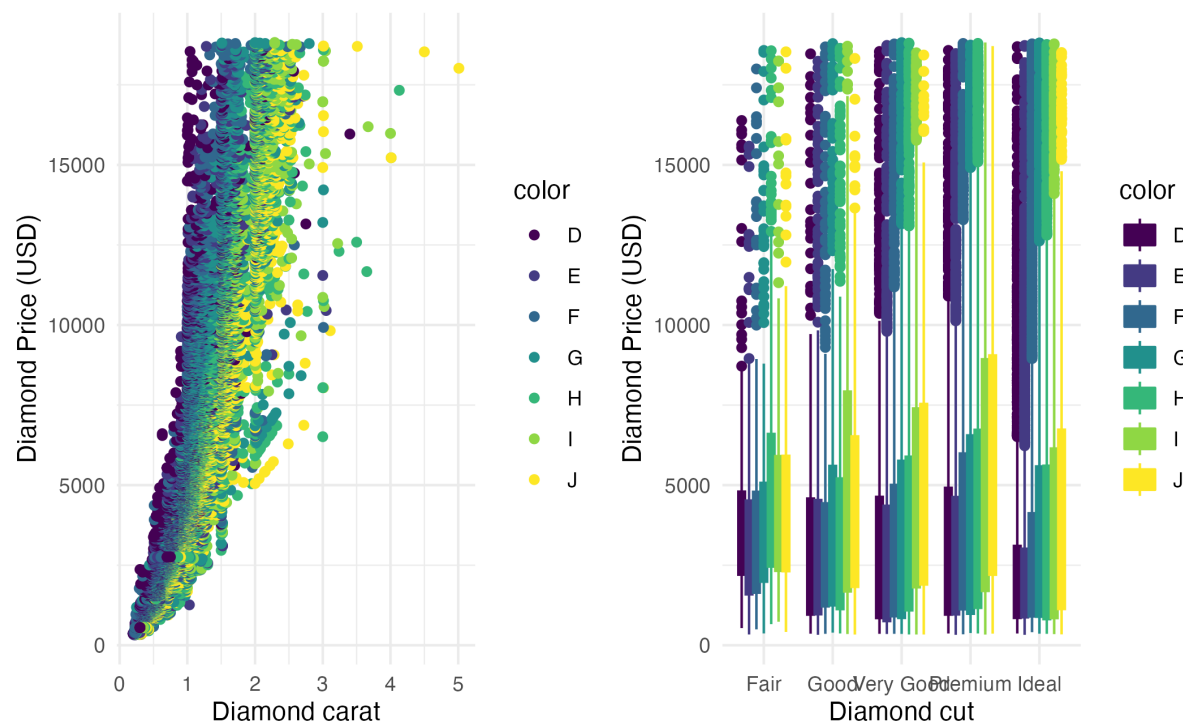
  - We'll cover some interesting ones today!

patchwork

- `patchwork` makes it really easy to combine separate ggplot objects into a single figure. The +, /, ( ) operators are used to combine each of these, with more fine-grain control with internal options.
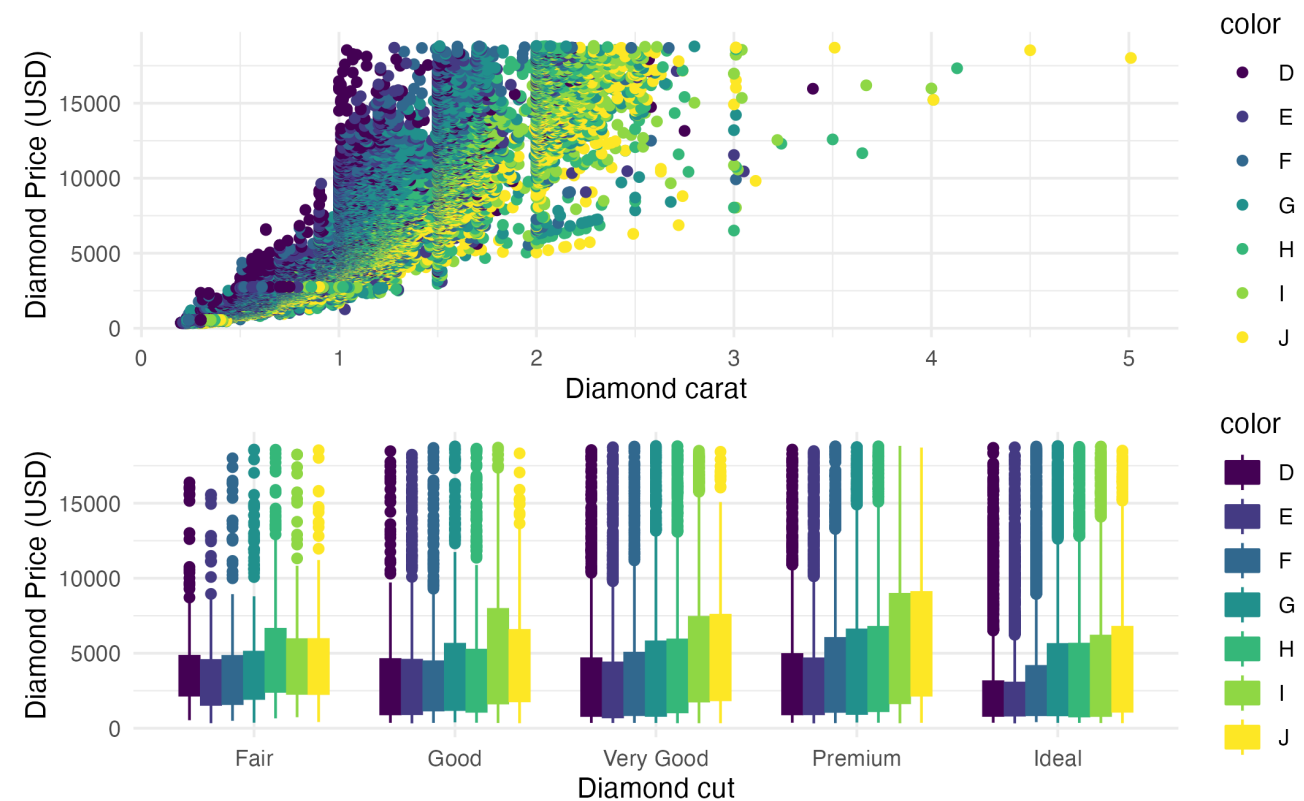
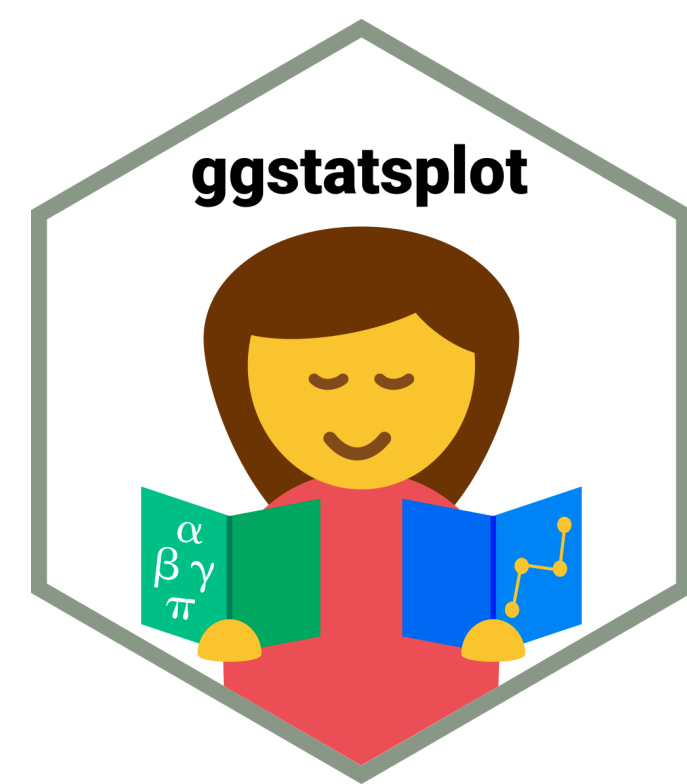**https://github.com/thomasp85/patchwork**

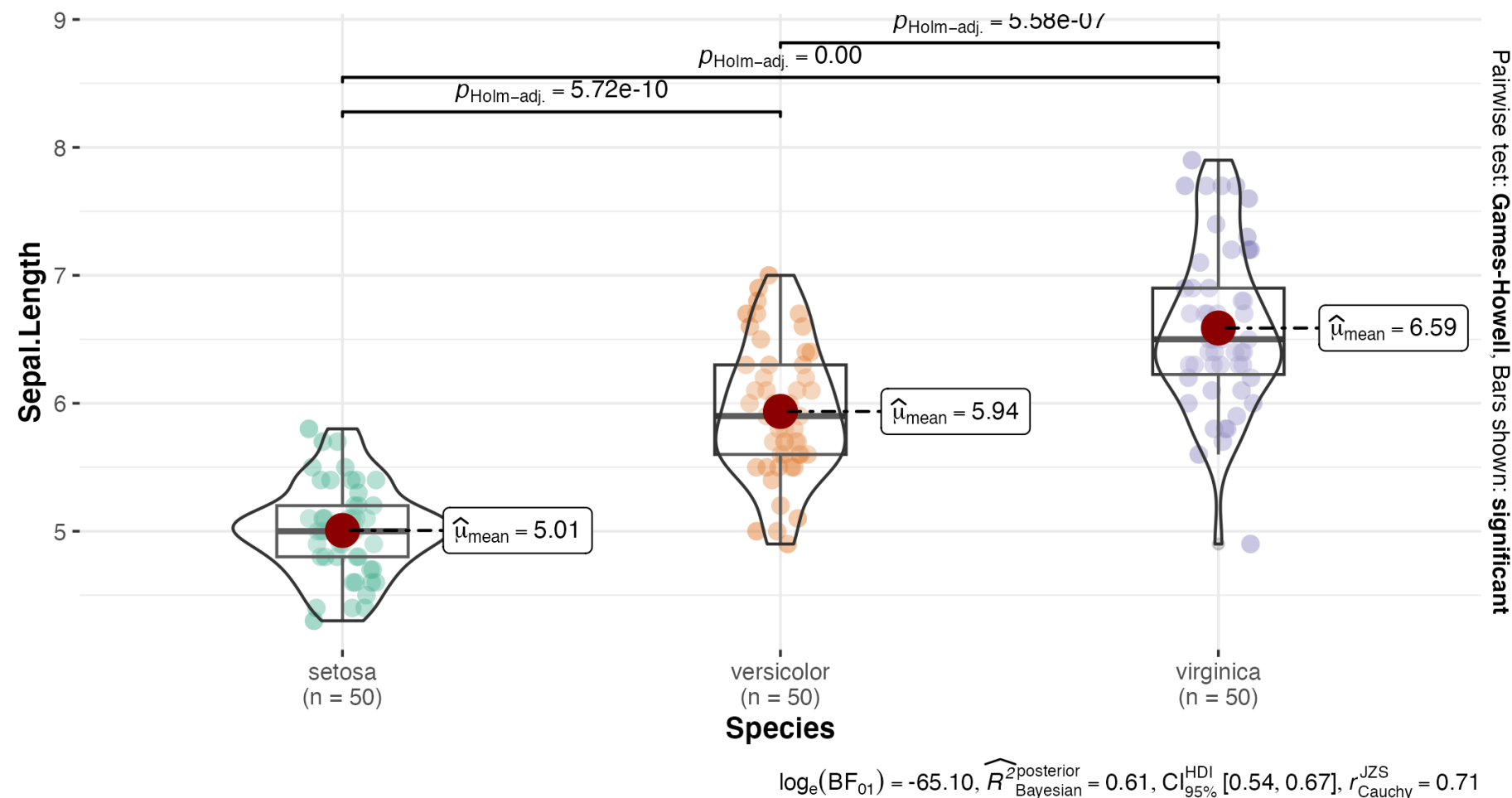## `p_carat + p_cut`

`p_carat / p_cut`

ggstatsplot

- `ggstatsplot` has a suite of common statistical comparisons built in to a ggplot visualization. Statistical tests are automatically run and reported, along with statistical objects on the visualization.

ggstatsplot

https://github.com/IndrajeetPatil/ggstatsplot

**Distribution of sepal length across Iris species**

$F_{\text{Welch}}(2, 92.21) = 138.91$, $p = 1.51\text{e-}28$, $\widehat{\omega}_p^2 = 0.74$, $\text{CI}_{95\%}$ [0.67, 1.00], $n_{\text{obs}} = 150$

$\log_e(\text{BF}_{01}) = -65.10$, $\widehat{R}^{2\,\text{posterior}}_{\text{Bayesian}} = 0.61$, $\text{CI}^{\text{HDI}}_{95\%}$ [0.54, 0.67], $r^{\text{JZS}}_{\text{Cauchy}} = 0.71$

ggrepel

- `ggrepel` creates labels on ggplots that do not overlap with data or other labels. This seems sort of trivial, but it's highly annoying when you have to deal with it!
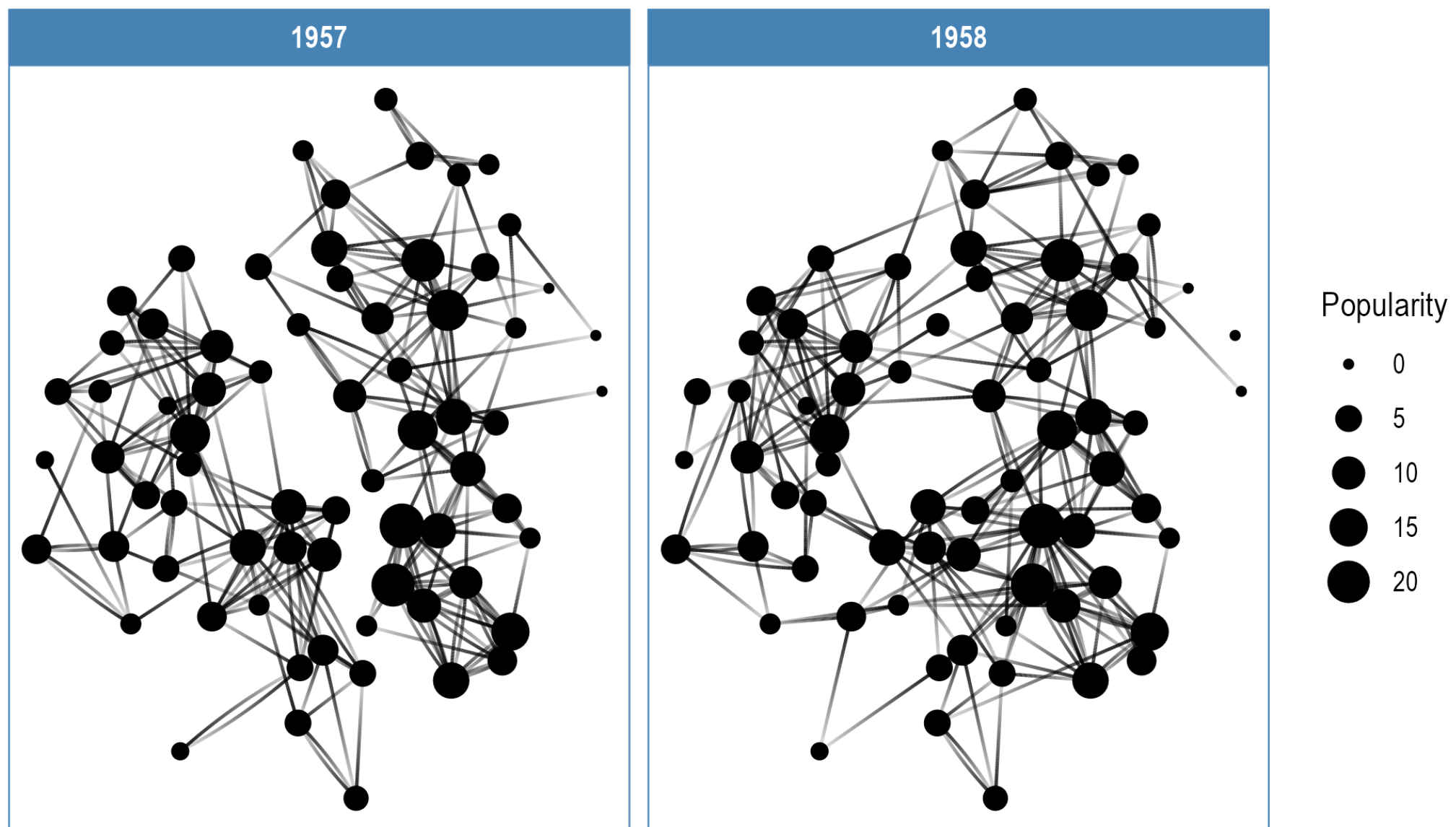
https://github.com/slowkow/ggrepel
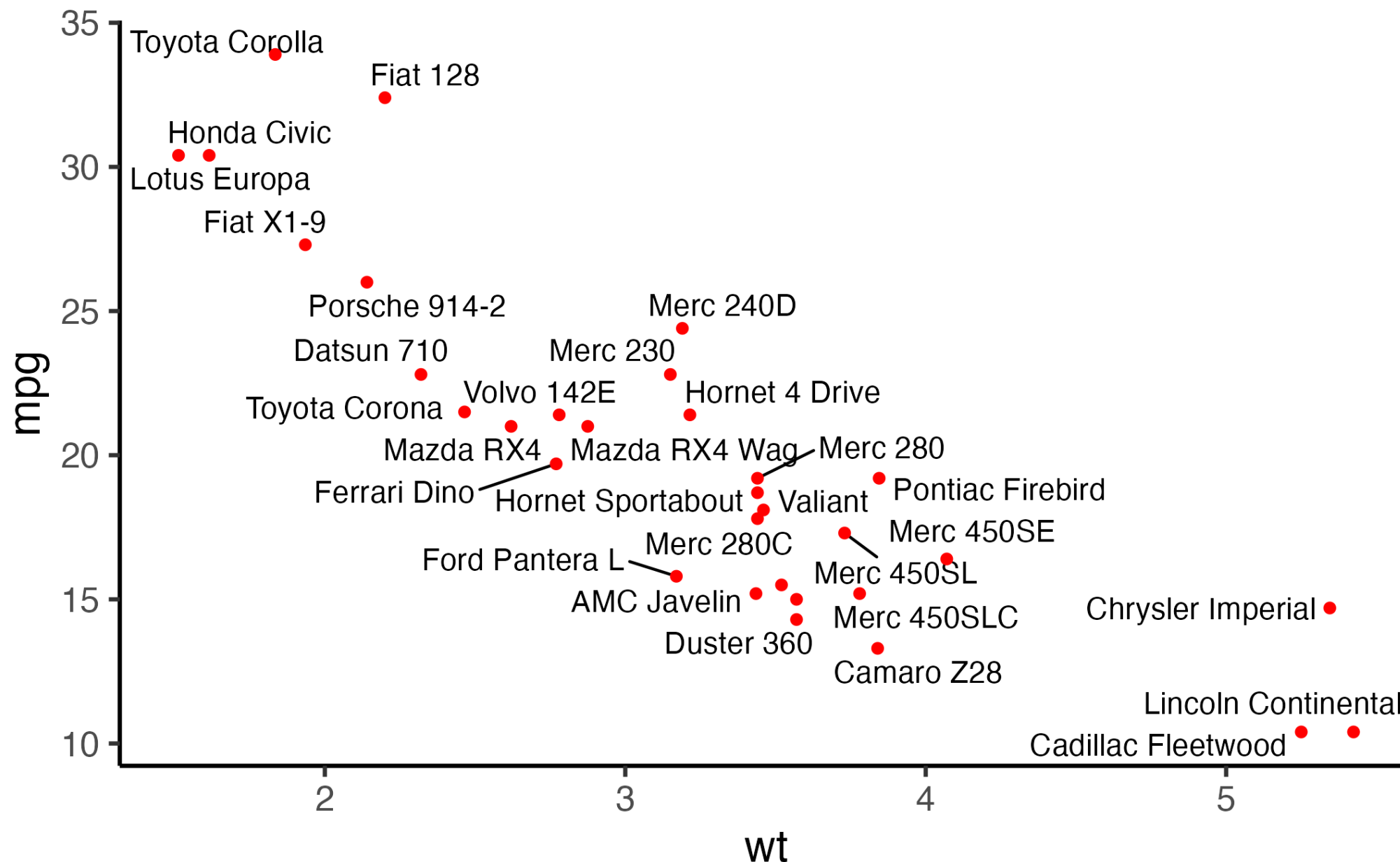
ggraph

- `ggraph` is designed to help plot relational and/or data structures in a ggplot type format. This is a great package if you want to plot network diagrams, an otherwise difficult task in ggplot.
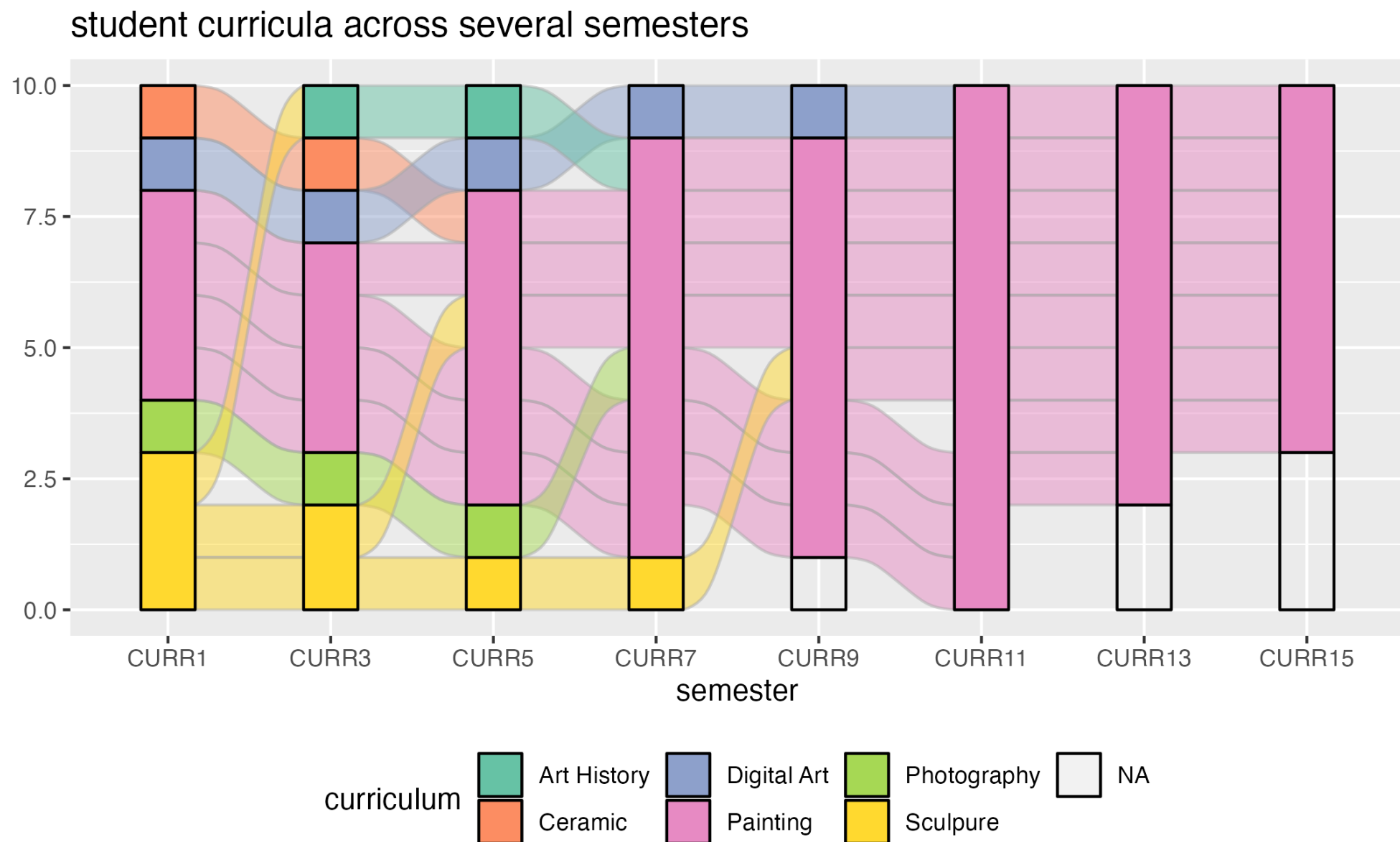
https://github.com/thomasp85/ggraph

ggalluvial

- `ggalluvial` creates alluvial plots for visualizing proportions or frequency distributions.

https://github.com/corybrunson/ggalluvial

ggspectra

- `ggspectra` creates spectra plots and statistics for light wave data.

https://docs.r4photobiology.info/ggspectra/
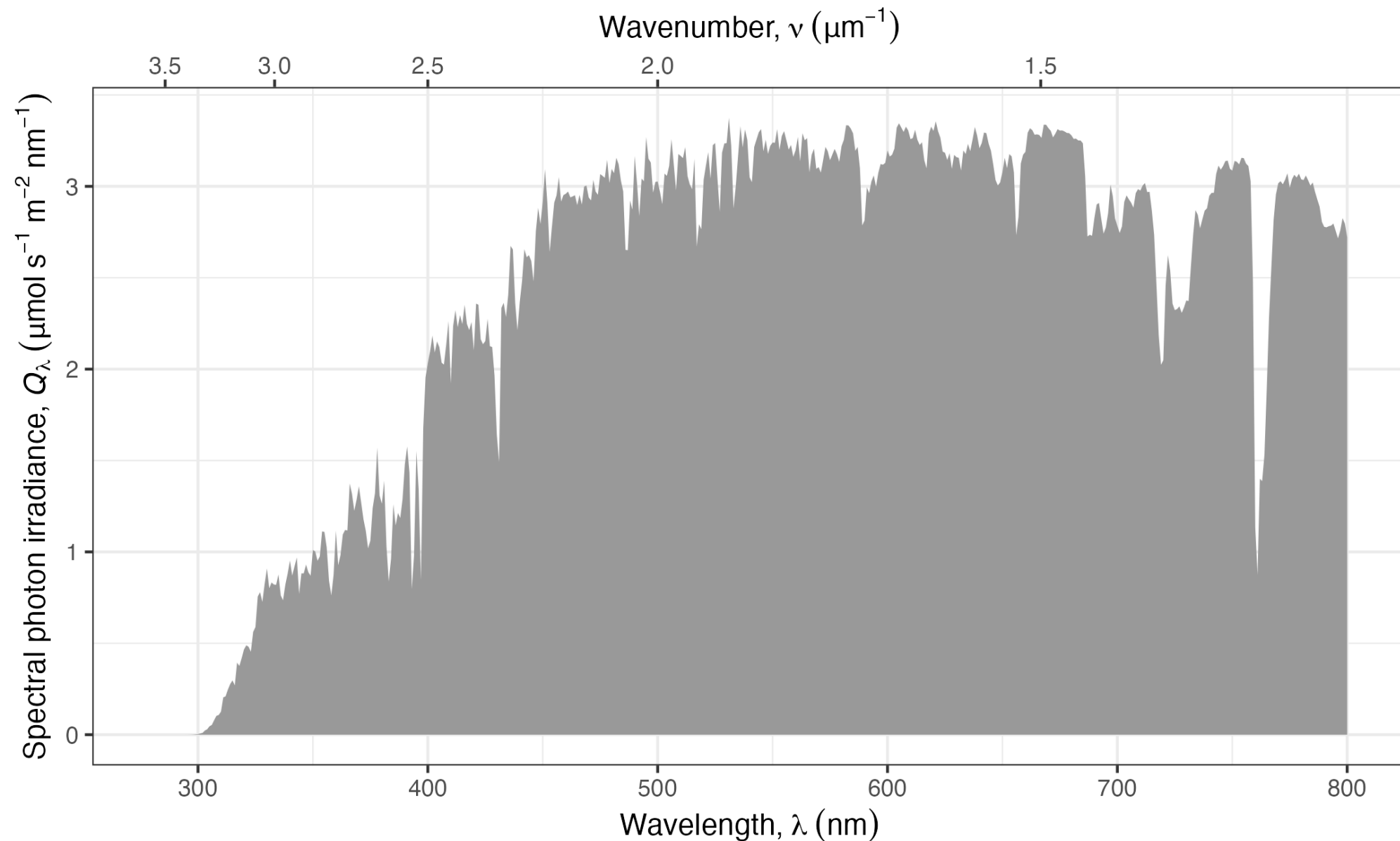
Which seems useful to you?

- Take a look at the package gallery and add some sample code to the RMD file for a package that might be useful to you:

  https://exts.ggplot2.tidyverse.org/gallery/