

Takeaways:

It's important to consider your audience when communicating your message. Viridis is a great package that is colourblind friendly! So as much as possible, try to use viridis in place of the standard RColourBrewer. Also have informative titles and captions. The format of your plot (scatter, barplot etc.) matters in communicating your message so choose wisely. Data vis is fun and exciting (a neverending story). Time to explore!

ggplot()

Examples:

```
ggplot(mpg, aes(displ, hwy)) +  
  geom_point(aes(colour = class)) +  
  geom_smooth(se = FALSE) +  
  labs(  
    x = "Engine displacement (L)",  
    y = "Highway fuel economy (mpg)",  
    colour = "Car type"  
  )
```

The `class` variable of the `mpg` dataset classifies cars into groups such as compact, midsize, and SUV. You can add a third variable, like `class`, to a two dimensional scatterplot by mapping it to an aesthetic. An aesthetic is a visual property of the objects in your plot. Aesthetics include things like the size, the shape, or the color of your points.

To map an aesthetic to a variable, associate the name of the aesthetic to the name of the variable inside `aes()`. `ggplot2` will automatically assign a unique level of the aesthetic (here a unique color) to each unique value of the variable, a process known as scaling. `ggplot2` will also add a legend that explains which levels correspond to which values.

Facet plots:

To facet your plot by a single variable, use `facet_wrap()`. The first argument of `facet_wrap()` should be a formula, which you create with `~` followed by a variable name (here "formula" is the name of a data structure in R, not a synonym for "equation"). The variable that you pass to `facet_wrap()` should be discrete.

```
ggplot(data = mpg) +  
  geom_point(mapping = aes(x = displ, y = hwy)) +  
  facet_wrap(~ class, nrow = 2)
```

