

# A simple, legible beamer template

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# Acknowledgements

- Inspired by notes from Professor James Scott

## Formatting guidelines

- In general, set the format of your presentation to target the “lowest common denominator”
  - ▶ Use a  $4 \times 3$  aspect ratio for older projectors
  - ▶ Use **large** text for the body and plots
  - ▶ Use color palettes readable by those who are colorblind
- Body text on a screen is most readable when it is sans-serif, but also use a standard serif font (e.g. Palatino) which has rich math support for math equations
  - ▶ Lato for body text
  - ▶ Palatino for math
  - ▶ Inconsolata for fixed width text.
- Don't overload the slide like I did here :-)

## Preview of font appearances

The density of the univariate Gaussian random variable denoted by  $x \sim \mathcal{N}$  is given by  $f(x; \mu, \sigma^2)$ , for location parameter  $\mu$  and scale parameter  $\sigma > 0$ ,

$$f(x; \mu, \sigma^2) = \frac{1}{\sqrt{2\pi\sigma^2}} \exp \left[ -\frac{1}{2\sigma^2} (x - \mu)^2 \right]$$

Generally, there is also the multivariate Gaussian  $\mathbf{x} \sim \mathcal{N}_p(\mathbf{m}, \Sigma)$ . The maximum likelihood estimate is

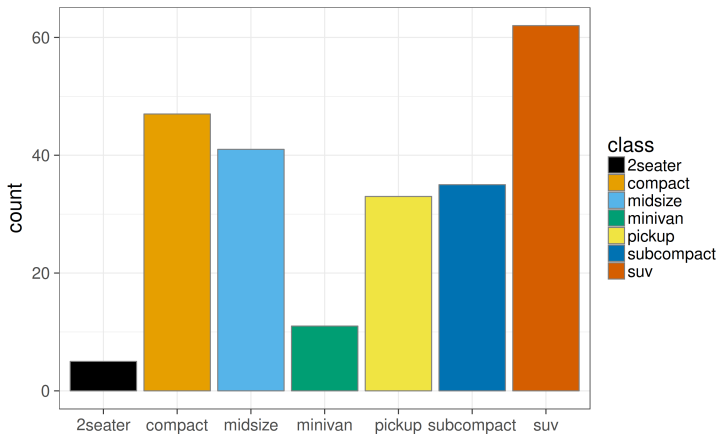
$$(\hat{\mu}, \hat{\sigma}^2) = \max_{\mu, \sigma} \prod_{i=1}^N f(x_i; \mu, \sigma^2).$$

# Plotting

- When saving plots, remember that the slides have a  $4\times 3$  aspect ratio, and try to fill up the slide

## Plotting with a colorblind-friendly palette

Suitable for dichromacy

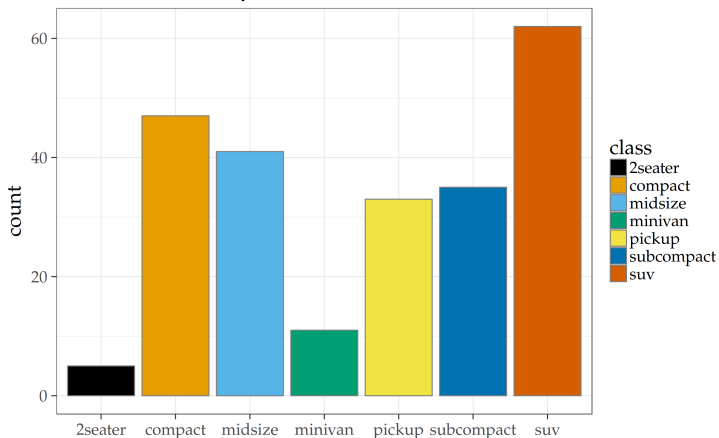


Source: <http://jfly.iam.u-tokyo.ac.jp/color/>

The default ggplot2 typeface is Helvetica, which looks OK except for the tight spacing between characters.

## Plotting with a colorblind-friendly palette

Suitable for dichromacy

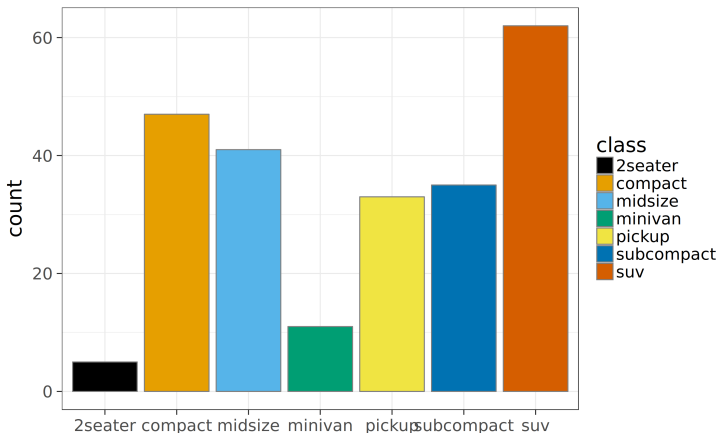


Source: <http://jfly.iam.u-tokyo.ac.jp/color/>

Palatino looks nice, but serifs are not optimal for legibility of text on a screen.

## Plotting with a colorblind-friendly palette

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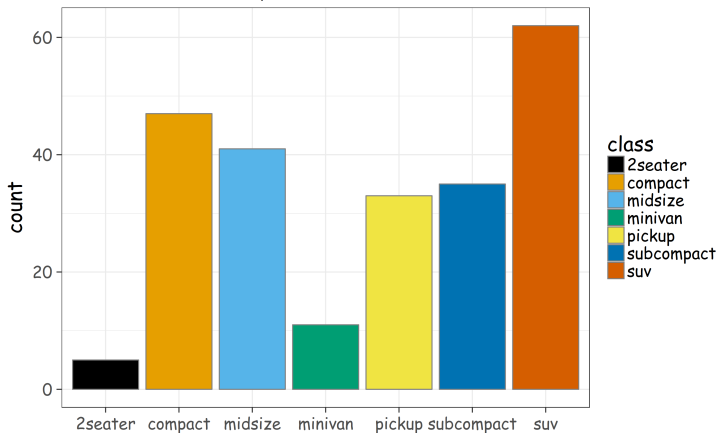
Source: <http://jfly.iam.u-tokyo.ac.jp/color/>

Lato Sans is like Helvetica, with more generous spacing.



## Plotting with a colorblind-friendly palette

Suitable for dichromacy



Source: <http://jfly.iam.u-tokyo.ac.jp/color/>

Comic Sans is hard to beat when it comes to legibility, and is also good for those with dyslexia.

# Quotation

*Don't believe everything you read on the Internet.*

—Mark Twain<sup>1</sup>

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<sup>1</sup>Not really.

# Theorem

## Theorem (Mass–energy equivalence)

*For mass  $m$ , speed of light  $c = 299,792,458 \text{ m/s}$ , the energy equivalence is given by  $E = mc^2$ .*

# Columns

To the right we two emoji of line graphs.



# Conclusion

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