A minimal example

Reproducible Researcher

2020-11-13

University of Minho

The Basics

Basic set-up of a Rmd beamer presentation

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- for a detailed overview of the beamer template used by Pandoc, please consult .

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- each **# Section Level 1 Heading** inserts a new section slide
- for a detailed overview of the beamer template used by Pandoc, please consult .
- you can also load your own beamer template by specifying the argument template: minho_university.tex

Bullet points

- Bullet 1

Bullet points

- Bullet 1
- Bullet 2

Bullet points

- Bullet 1
- Bullet 2
- Bullet 3

Bullet points

- Bullet 1
- Bullet 2
- Bullet 3
    - subitem 1

Bullet points

- Bullet 1
- Bullet 2
- Bullet 3
  - subitem 1
  - subitem 2

Slide with actual R Output

- specify **chunk option**: echo=TRUE

```
head(penguins)
```

```
# A tibble: 6 x 8
  species island bill_length_mm bill_depth_mm flipper_length_~ b
  <fct>   <fct>           <dbl>         <dbl>            <int>
1 Adelie  Torge~           39.1          18.7              181
2 Adelie  Torge~           39.5          17.4              186
3 Adelie  Torge~           40.3          18                195
4 Adelie  Torge~           NA            NA                 NA
5 Adelie  Torge~           36.7          19.3              193
6 Adelie  Torge~           39.3          20.6              190
# ... with 1 more variable: year <int>
```

Including Math

$$e = \lim_{n \to \infty} \left(1 + \frac{1}{n} \right)^n$$

Including images

- Images can be useful for presentations:

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Figure 1: A nice cow

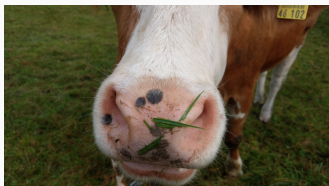## Including images

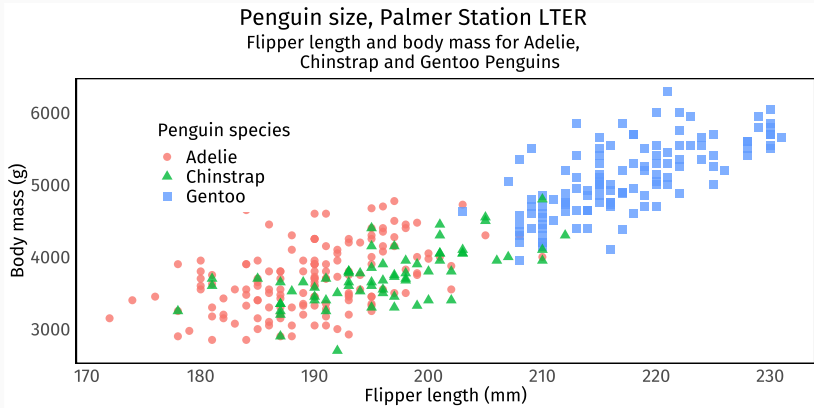- Images can be useful for presentations:

Figure 1: A nice cow

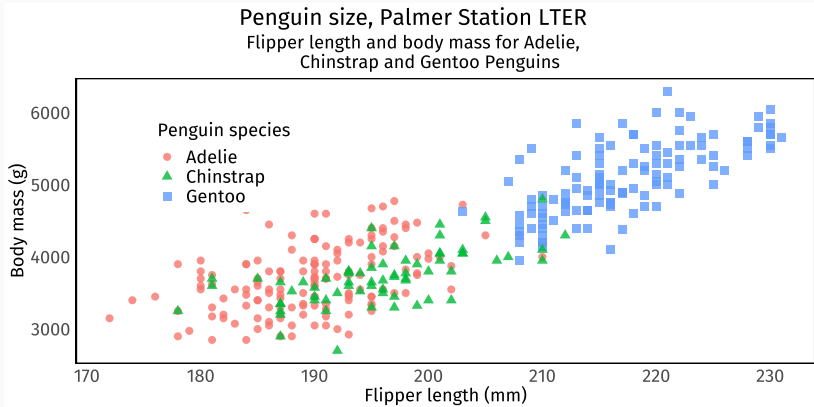- Global options for inclusion of figures in YAML header

```
---
output:
  pdf_document:
    fig_width: 7
    fig_height: 6
---
```

Integrating content and code

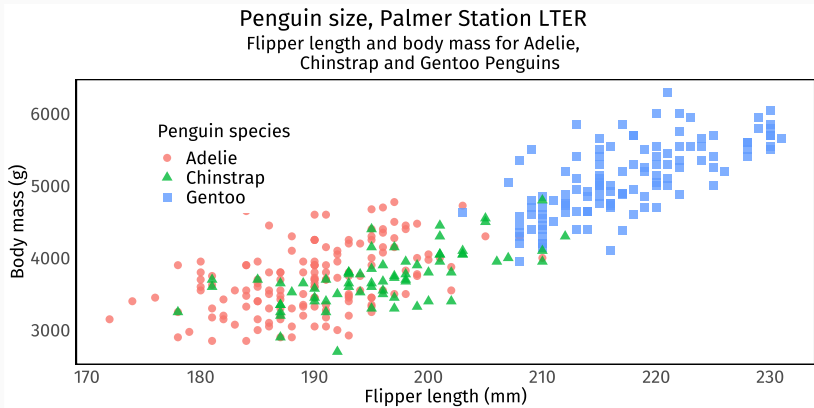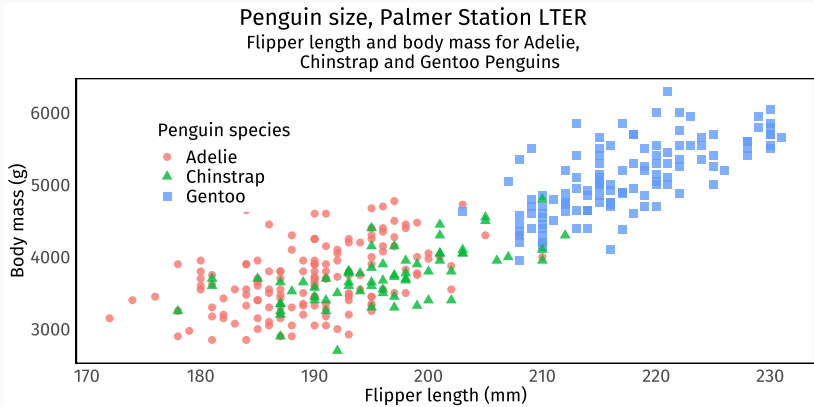- `showtext` package: match fonts of presentation with the fonts in `ggplot`:

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- `showtext_auto()` before opening a new graphic device

Including tables - basic `kable`

```
kable(
  penguins %>%
    group_by(species) %>%
    # calculate mean by species
    summarize(across(
      where(is.numeric),
      ~ mean(., na.rm = T)
    )) %>%
    # drop the year variable for the printed table
    select(-year)
)
```

species	bill_length_mm	bill_depth_mm	flipper_length_mm	body_m
Adelie	38.79139	18.34636	189.9536	370
Chinstrap	48.83382	18.42059	195.8235	373
Gentoo	47.50488	14.98211	217.1870	507

Including tables - advanced styling with `kable`

- use `kable` together with `kableExtra` for advanced styling options

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Table 2: Differences in Flipper and Bill Length across Penguin Species

Species	Bill Length (mm)	Bill Depth (mm)	Flipper Length (mm)	Body Mass (kg)
Adelie	38.79	18.35	189.95	3700.66
Chinstrap	48.83	18.42	195.82	3733.09
Gentoo	47.50	14.98	217.19	5076.02

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- find the full documentation of `kableExtra` for PDF documents here

Advanced options and further customization

Tweaking and more advanced options

- long, extensive and **highly useful** documentation of the different knitr chunk options