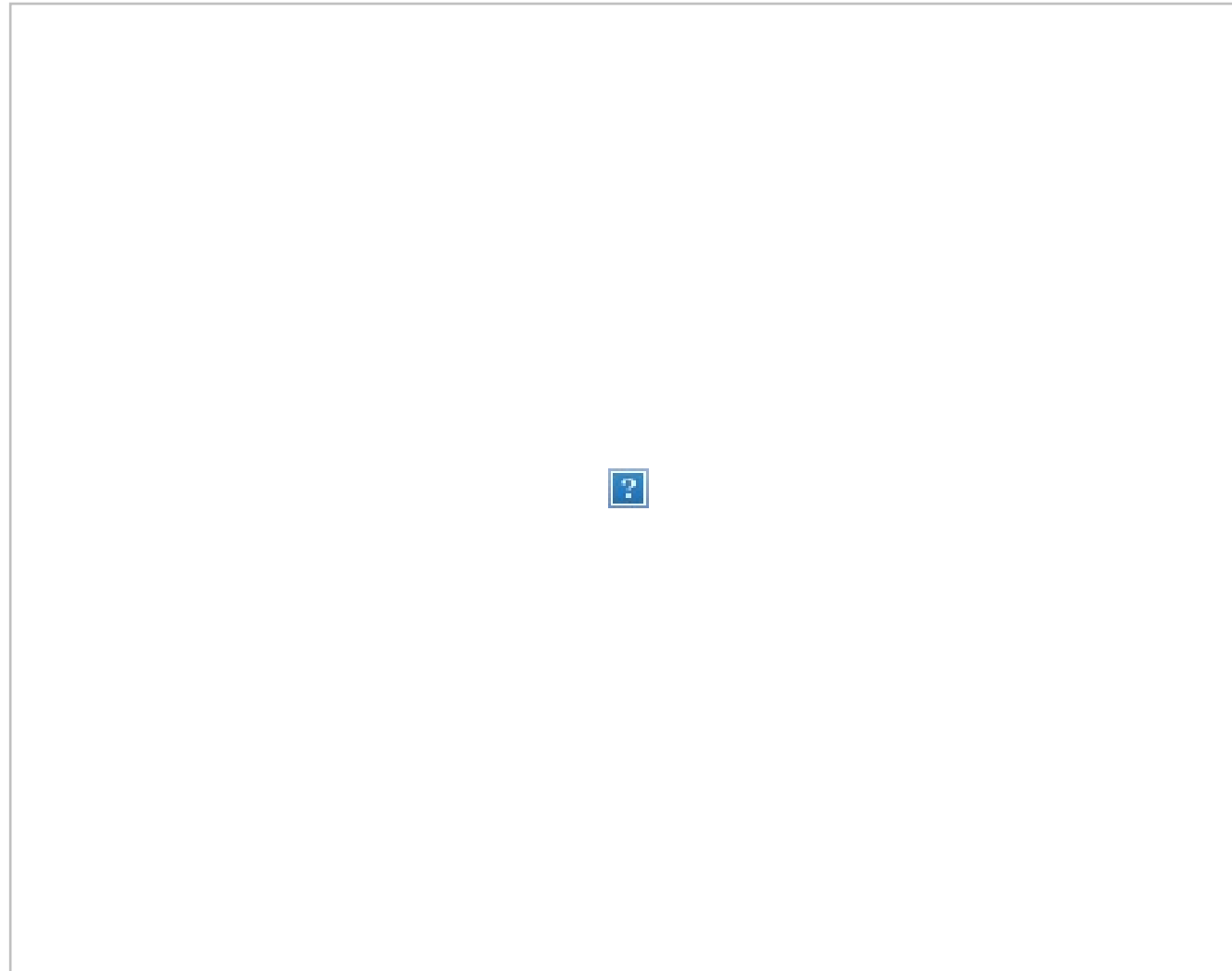


Making reports with



R Markdown connects code with results



R Markdown connects code with results

Supplementary material

John Doe, Joan Doe, Jan Doh, Dyon Do

08 April, 2020

Load the data

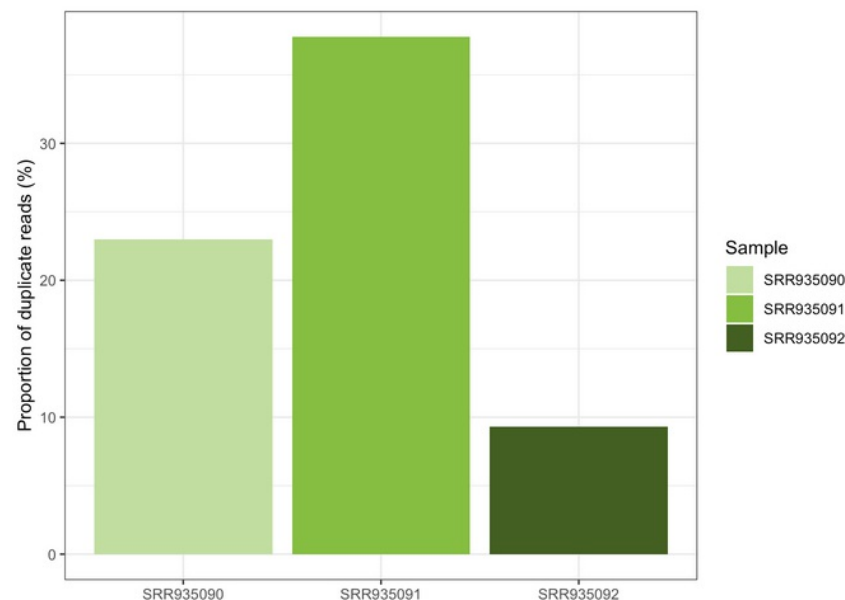
We have three different samples and several quality metrics for each, originating in publicly available data.

```
data <- read.table("rmarkdown/intermediate/multiqc_general_stats.txt",
  sep = "\t",
  header = TRUE,
  stringsAsFactors = FALSE)
```

Plot quality metrics

We will now plot the proportion of read duplications in each of the samples, to see if there are any problems with data quality.

```
ggplot(data, aes(x = Sample,
  y = FastQC_mqc.generalstats.fastqc.percent_duplicates,
  fill = Sample)) +
  geom_bar(stat = "identity") +
  theme_bw() +
  labs(x = NULL,
  y = "Proportion of duplicate reads (%)") +
  scale_fill_manual(values = c("#c1dea0", "#85be42", "#425f21"))
```



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2 title: "Supplementary material"
3 author: "John Doe, Joan Doe, Jan Doh, Dyon Do"
4 date: "`r format(Sys.time(), '%d %B, %Y')`"
5 output: html_document
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7
8 ```{r Load packages, include = FALSE}
9 library("ggplot2")
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26 We will now plot the proportion of read duplications in each of the samples, to
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29 ```{r Plot data}
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R Markdown connects code with results

A header in YAML-format

- Defines document-wide options
- Specifies the output format
- Can include several parameters

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- Freely add and format text using standard markdown

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R Markdown connects code with results

A **header** in YAML-format

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Code **chunks**

- Evaluate R code and show its output
- Specify global or local chunk options (e.g. figure dimensions)
- Also works with several other languages (e.g. Bash and Python)

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```

Rendering R Markdown documents

- Render from the **command line** (or R terminal in RStudio):

```
R -e "rmarkdown::render('Report.Rmd')"
```

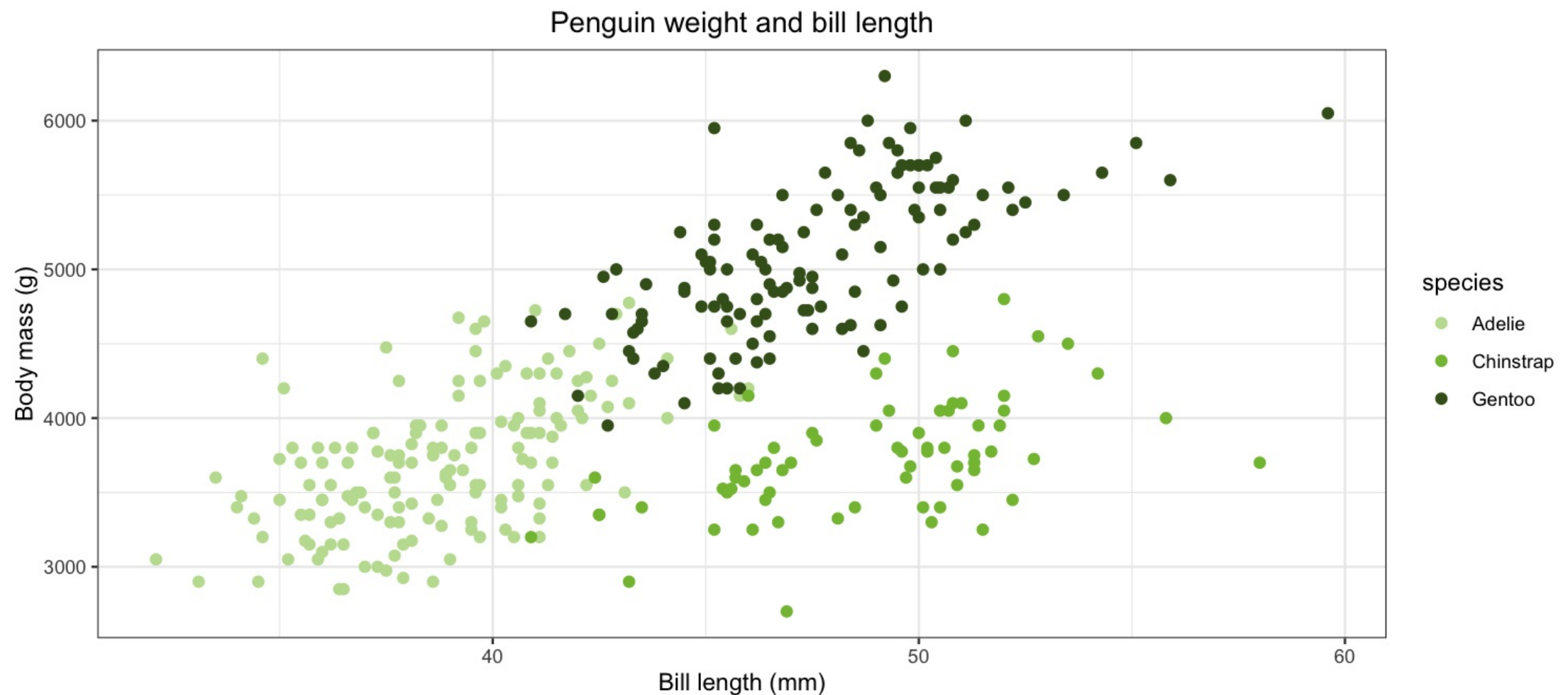
- Render from the **RStudio menu**

Output formats

- **Reports** and general documents (HTML, PDF, Microsoft Word)
- **Presentations** (Xaringan, reveal.js, PowerPoint, Beamer)
- **Interactive documents** and **dashboards** (HTML widgets, Shiny)
- **Books** and **websites** (Bookdown)

Presentations with R Markdown

```
library("ggplot2")
library("palmerpenguins")
data(penguins, package = "palmerpenguins")
ggplot(penguins, aes(x = bill_length_mm,
                    y = body_mass_g,
                    colour = species)) +
  geom_point(size = 2) +
  theme_bw() +
  labs(x = "Bill length (mm)",
       y = "Body mass (g)") +
  ggtitle("Penguin weight and bill length") +
  theme(plot.title = element_text(hjust = 0.5)) +
  scale_colour_manual(values = c("#c1dea0", "#85be42", "#425f21"))
```



Questions?