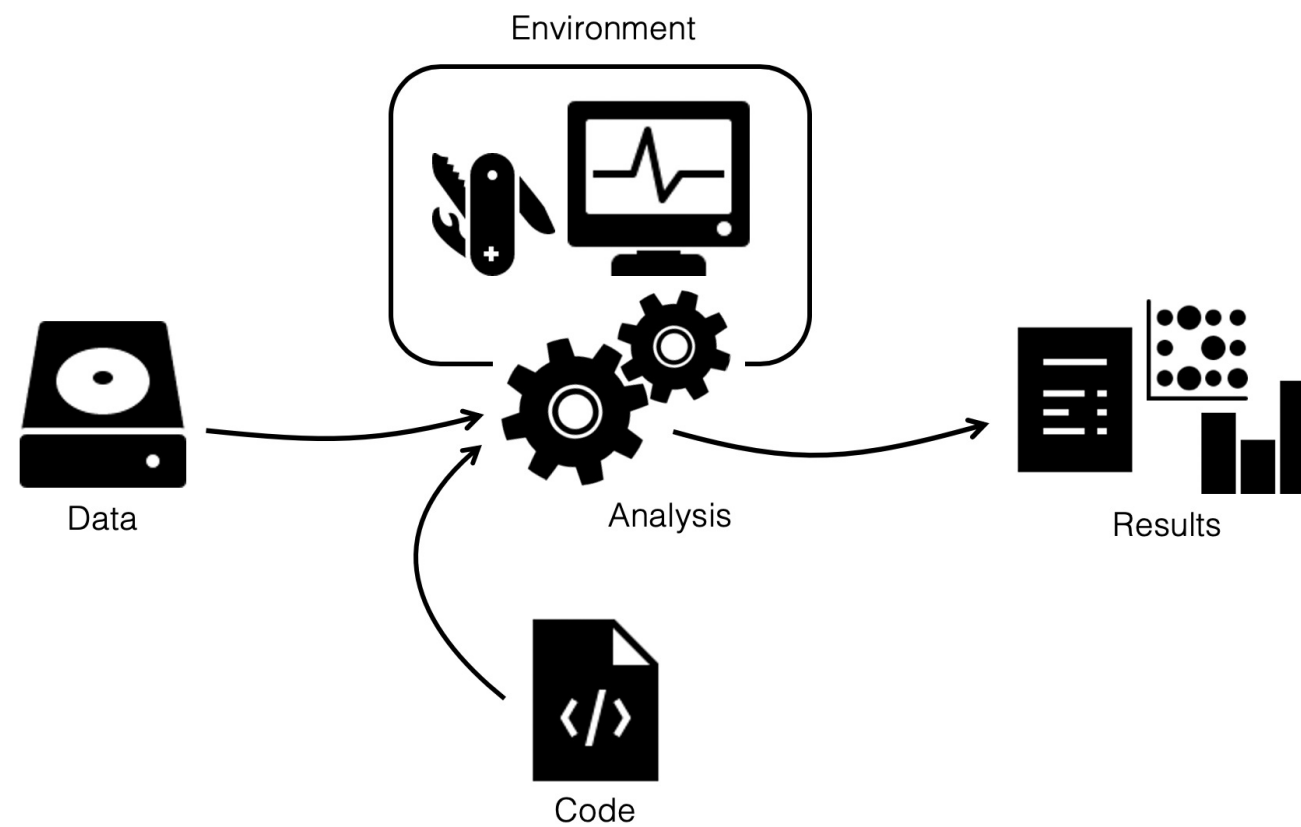


Making reports with



# R Markdown connects code with results



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## Supplementary material

John Doe, Joan Doe, Jan Doh, Dyon Do

08 April, 2020

## Load the data

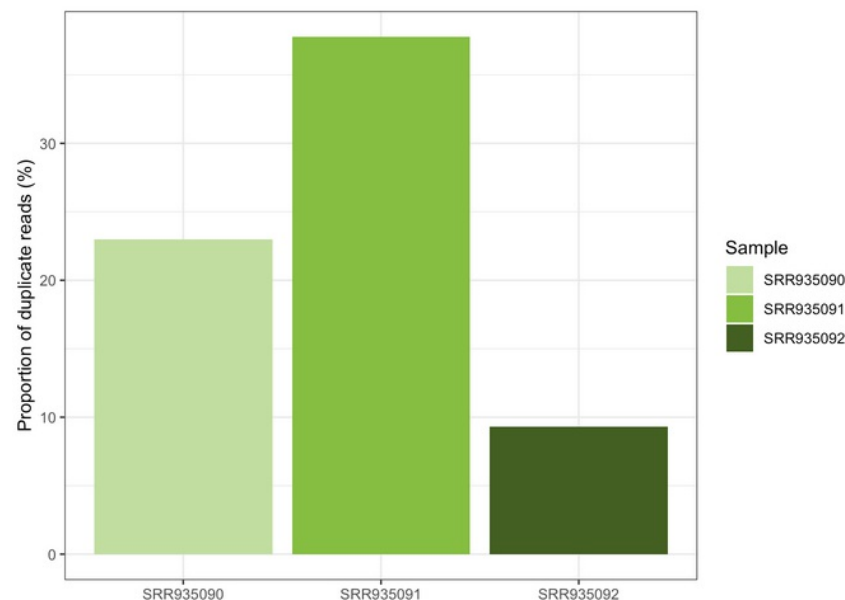
We have three different samples and several quality metrics for each, originating in publicly available data.

```
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"
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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")
10 ```
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24 # Plot quality metrics
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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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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**

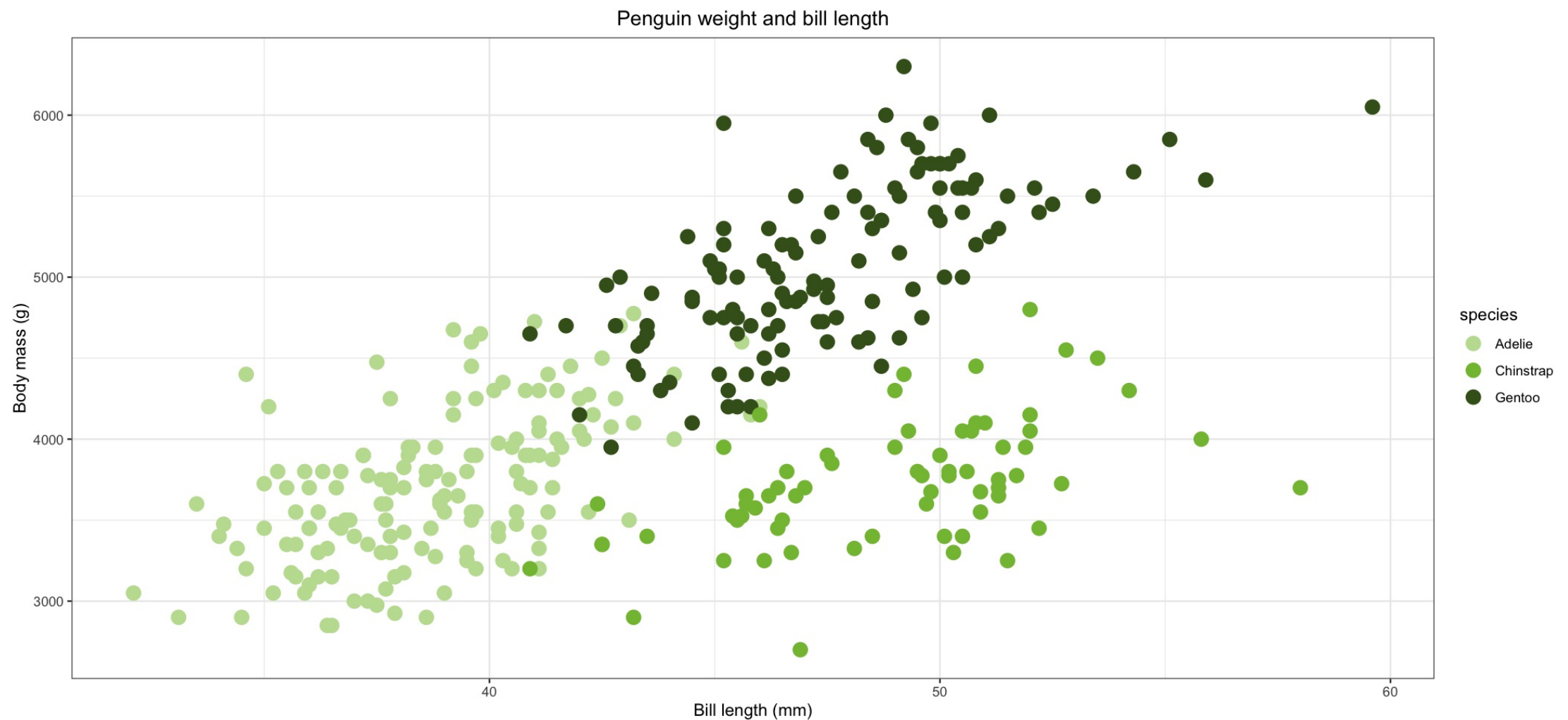
# Output formats

- **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 = 4) +
  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?