

OSD2025 Quarto demo with knitr engine (R only)

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Add a heading in your document

This is a sentence with some **bold text**, *italic text*, `code`, and a [link](#).



Figure 1: The Quarto logo

See [Figure 1](#) for the Quarto logo.

Equation [1](#) gives the formula for the population mean:

$$\mu = \frac{\sum x}{N} \tag{1}$$

Section [shows](#) how to add R or Python code chunks.

The palmerpenguins package was developed by Horst, Hill, and Gorman (2020). We will create a document using Quarto (Allaire et al. 2025) and R (R Core Team 2024) or Python (Van Rossum and Drake 2009).

This sentence ends with a footnote.¹

Add R code chunks

¹This is an example footnote.

```
library(palmerpenguins) # for data
library(tidyverse)      # for data wrangling and visualization
library(knitr)           # for tables

ggplot(data = penguins,
       aes(x = flipper_length_mm,
           y = bill_length_mm)) +
  geom_point(aes(color = species,
                 shape = species))
```

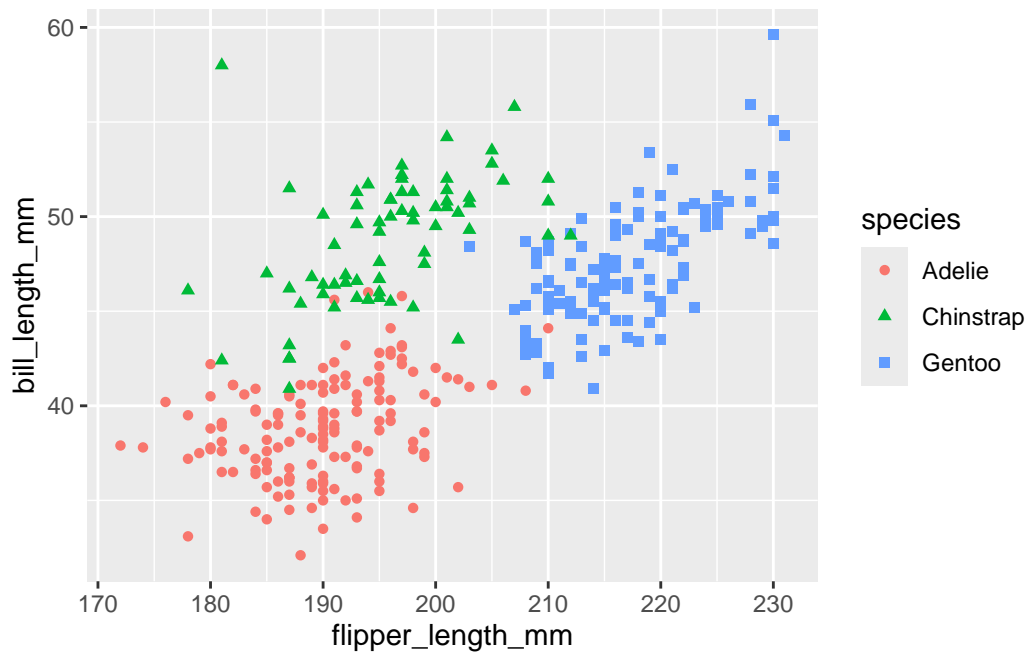


Figure 2: Scatterplot of flipper and bill lengths in R

Add inline code

The palmerpenguins package contains data for 344 penguins.

Add tables

Table 1 and Table 2 show different table options in Quarto.

Markdown

```
| fruit | price |  
|-----|-----|  
| apple | 2.05 |  
| pear  | 1.37 |  
| orange | 3.09 |
```

```
: Fruit prices {#tbl-md .striped .hover}
```

Table 1: Fruit prices

fruit	price
apple	2.05
pear	1.37
orange	3.09

R

```
penguins %>%  
  group_by(species) %>%  
  summarise(  
    `Mean bill length` = mean(bill_length_mm, na.rm = T),  
    `Min bill length` = min(bill_length_mm, na.rm = T),  
    `Max bill length` = max(bill_length_mm, na.rm = T),  
    `Mean flipper length` = mean(flipper_length_mm, na.rm = T),  
    `Min flipper length` = min(flipper_length_mm, na.rm = T),  
    `Max flipper length` = max(flipper_length_mm, na.rm = T),  
    `Correlation, r` = cor(flipper_length_mm, bill_length_mm, use = "complete")  
  ) %>%  
  kable(digits = c(2, 2, 2, 2, 2))
```

Table 2: Summary statistics for flipper and bill lengths

species	Mean bill length	Min bill length	Max bill length	Mean flipper length	Min flipper length	Max flipper length	Correlation, r
Adelie	38.79	32.1	46.0	189.95	172	210	0.33

Table 2: Summary statistics for flipper and bill lengths

species	Mean bill length	Min bill length	Max bill length	Mean flipper length	Min flipper length	Max flipper length	Correlation, r
Chinstrap	48.83	40.9	58.0	195.82	178	212	0.47
Gentoo	47.50	40.9	59.6	217.19	203	231	0.66

References

- Allaire, J. J., Charles Teague, Carlos Scheidegger, Yihui Xie, Christophe Dervieux, and Gordon Woodhull. 2025. “Quarto.” <https://doi.org/10.5281/zenodo.5960048>.
- Horst, Allison M, Alison Presmanes Hill, and Kristen B Gorman. 2020. *Allison-horst/Palmerpenguins: V0.1.0*. Zenodo. <https://doi.org/10.5281/ZENODO.3960218>.
- R Core Team. 2024. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.
- Van Rossum, Guido, and Fred L. Drake. 2009. *Python 3 Reference Manual*. Scotts Valley, CA: CreateSpace.