Amazing Document

Amazing Location

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Table of contents

# 1. Quarto

## 1.1 General Markup

You can write standard markdown code. Using **bold**, *italic* or ~~underlined~~ text. You can include an external figure and also using cross reference with @fig-quarto that produce [Figure 1](#fig-quarto)

|  |
| --- |
| Figure 1: My beautiful caption |

## 1.2 Math

You can write math using Latex code:

$$  
y = \beta\_0 + \beta\_1 + \epsilon  
$$

And also inline math using $\alpha$ that produce

## 1.3 Citations

You can cite references from a .bib file using the syntax [@Chen2021-jb] that produce (Chen et al. 2021). We can also cite multiple authors [@Morey2011-zc; @Lakens2018-ri] (Morey and Rouder 2011; Lakens, Scheel, and Isager 2018) or suppress the author name [-@Valentine2011-yq] (2011).

A reference section will be automatically created at the end of the document (see [Section 1.8](#sec-refs)).

This is the result:

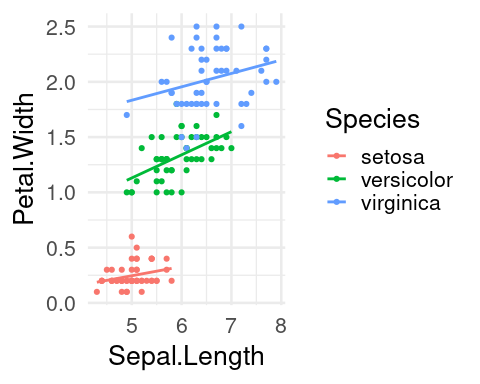
dat <- iris  
summary(iris)

Sepal.Length Sepal.Width Petal.Length Petal.Width   
 Min. :4.300 Min. :2.000 Min. :1.000 Min. :0.100   
 1st Qu.:5.100 1st Qu.:2.800 1st Qu.:1.600 1st Qu.:0.300   
 Median :5.800 Median :3.000 Median :4.350 Median :1.300   
 Mean :5.843 Mean :3.057 Mean :3.758 Mean :1.199   
 3rd Qu.:6.400 3rd Qu.:3.300 3rd Qu.:5.100 3rd Qu.:1.800   
 Max. :7.900 Max. :4.400 Max. :6.900 Max. :2.500   
 Species   
 setosa :50   
 versicolor:50   
 virginica :50

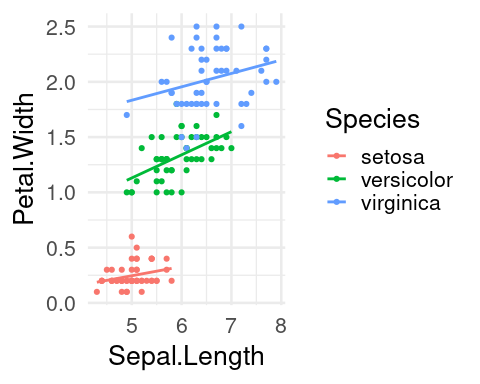
## 1.4 Code chunks - Plots

library(ggplot2)  
dat |>  
 ggplot(aes(x = Sepal.Length, y = Petal.Width, color = Species)) +  
 geom\_point() +  
 geom\_smooth(method = "lm", se = FALSE) +  
 theme\_minimal(20)

`geom\_smooth()` using formula = 'y ~ x'



`geom\_smooth()` using formula = 'y ~ x'



## 1.5 Code chunks - Tables

You can also create already formatted tables with the statistics. Let’s fit a simple linear model:

fit <- lm(Petal.Width ~ Sepal.Length \* Species, data = dat)  
summary(fit)

Call:  
lm(formula = Petal.Width ~ Sepal.Length \* Species, data = dat)  
  
Residuals:  
 Min 1Q Median 3Q Max   
-0.56675 -0.10596 -0.02419 0.09624 0.50897   
  
Coefficients:  
 Estimate Std. Error t value Pr(>|t|)   
(Intercept) -0.17022 0.38833 -0.438 0.66180   
Sepal.Length 0.08314 0.07739 1.074 0.28444   
Speciesversicolor 0.25348 0.49994 0.507 0.61292   
Speciesvirginica 1.39633 0.48104 2.903 0.00428 \*\*  
Sepal.Length:Speciesversicolor 0.12621 0.09371 1.347 0.18014   
Sepal.Length:Speciesvirginica 0.03827 0.08848 0.433 0.66599   
---  
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
  
Residual standard error: 0.1909 on 144 degrees of freedom  
Multiple R-squared: 0.9394, Adjusted R-squared: 0.9372   
F-statistic: 446.1 on 5 and 144 DF, p-value: < 2.2e-16

## 1.6 Code chunks - Tables

Let’s produce the table with the broom and kableExtra packages:

library(flextable)  
library(broom)  
  
fit |>   
 broom::tidy() |>   
 flextable() |>   
 autofit() |>   
 theme\_booktabs()

| term | estimate | std.error | statistic | p.value |
| --- | --- | --- | --- | --- |
| (Intercept) | -0.17022108 | 0.38833483 | -0.4383359 | 0.661799706 |
| Sepal.Length | 0.08314444 | 0.07738610 | 1.0744106 | 0.284435724 |
| Speciesversicolor | 0.25347680 | 0.49993857 | 0.5070159 | 0.612919207 |
| Speciesvirginica | 1.39632946 | 0.48104236 | 2.9027162 | 0.004281915 |
| Sepal.Length:Speciesversicolor | 0.12621275 | 0.09370888 | 1.3468601 | 0.180141151 |
| Sepal.Length:Speciesvirginica | 0.03827201 | 0.08848065 | 0.4325467 | 0.665991191 |

## 1.7 Inline code chunks

If you want to use R code within the text to report statistics you can use the syntax `r r code`. For example:

* the average Sepal.Length for the Setosa group is `r mean(iris$Sepal.Length[iris$Species == 'setosa'])`

Become

* the average Sepal.Length for the Setosa group is 5.006

## 1.8 References

Go back to [Section 1.3](#sec-citations)

Chen, Gang, Daniel S Pine, Melissa A Brotman, Ashley R Smith, Robert W Cox, and Simone P Haller. 2021. “Trial and Error: A Hierarchical Modeling Approach to Test-Retest Reliability.” *NeuroImage* 245 (December): 118647. <https://doi.org/10.1016/j.neuroimage.2021.118647>.

Lakens, Daniël, Anne M Scheel, and Peder M Isager. 2018. “Equivalence Testing for Psychological Research: A Tutorial.” *Adv. Methods Pract. Psychol. Sci.* 1 (2): 259–69. <https://doi.org/10.1177/2515245918770963>.

Morey, Richard D, and Jeffrey N Rouder. 2011. “Bayes Factor Approaches for Testing Interval Null Hypotheses.” *Psychol. Methods* 16 (4): 406–19. <https://doi.org/10.1037/a0024377>.

Valentine, Jeffrey C, Anthony Biglan, Robert F Boruch, Felipe González Castro, Linda M Collins, Brian R Flay, Sheppard Kellam, Eve K Mościcki, and Steven P Schinke. 2011. “Replication in Prevention Science.” *Prev. Sci.* 12 (2): 103–17. <https://doi.org/10.1007/s11121-011-0217-6>.