COOKBOOK

My Subtitle

by

Department of

Submitted in partial fulfillment of
the requirements for the degree of

Faculty of ,

Date: _____ Signature:

_____

Version control

v.1.0 – Initial version

1 Results

1.1 Executive summary

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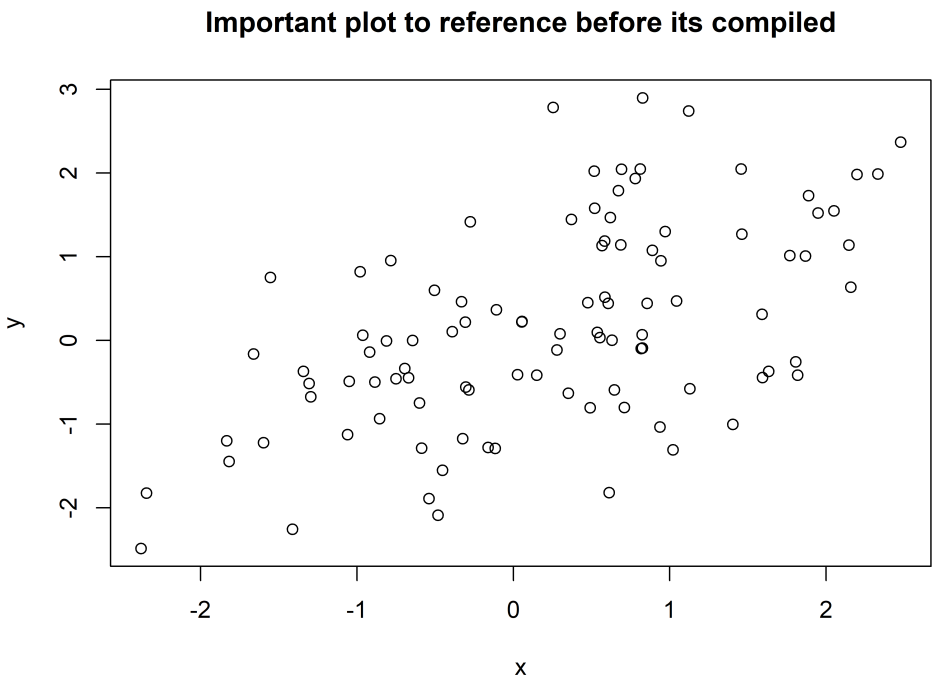

Figure 1.1: Executive graph for executive thoughts

1.2 Introduction

```
This is a text box if you like textboxes
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Links can be given in this format (for html versions): link

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scelerisque. Maecenas id ligula ultricies, tristique sem eu, eleifend est. Cras tempor feugiat nibh sit amet efficitur.

1.3 Deviations from the Protocol

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1.4 Planned investigations

If you’re feeling cocky, spruce up your report with model descriptions in Latex, eg.:

$$FPR = \frac{FP}{N} = \frac{FP}{FP + TN}$$
$$TPR = \frac{TP}{P} = \frac{FP}{FP + FN}$$

$$log(Cool\ variable_{i,j}) = \alpha_0 + \alpha_1 \times Independent\ variable_1 +$$

$$\alpha_2 \times Independent\ variable_{2,i,j} + \alpha_3 \times Sex_i +$$

$$\alpha_2 \times Independent\ variable_{3,i,j} * \alpha_{3,k} \times Treatment +$$

$$\delta_{0,i} + \delta_{1i} \times j + \epsilon_{i,j}$$

where,

- **i** is the subject number,
- **j** is the time point,
- **k** is the treatment,
- ϵ is the residual error, and
- δ represents the random effects.

1.5 Chapter title

1.5.1 Relevelling

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas et justo non erat lobortis tincidunt. In et nunc sollicitudin, pellentesque neque sit amet, blandit mauris. Praesent nunc urna, mattis non risus eu, egestas bibendum nunc. Mauris et hendrerit purus. Morbi posuere nibh erat, vel dignissim nisl fermentum sed. Vivamus nisi tellus, placerat vitae accumsan nec, tincidunt ac leo. Phasellus sed dolor et massa placerat sodales. Nulla facilisi. Sed sed justo nec lacus egestas malesuada hendrerit quis ligula. Vestibulum in purus mattis, elementum quam sit

amet, eleifend lorem. Nunc dictum ligula ante, sit amet auctor nisi aliquet non. Donec ullamcorper ultrices molestie.

Sorry, the below is a dull example of releveling:

```
# This is an example of factor releveling snatched from
# https://www.tutorialspoint.com/r/r_factors.htm

data_f <- c("East", "West", "East", "North", "North", "East",
    "West", "West", "West", "East", "North")
# Create the factors
factor_data <- factor(data_f)
print(factor_data)
```

```
##  [1] East  West  East  North North East  West  West  West  East  North
## Levels: East North West
```

```
# Apply the factor function with required order of the
# level.
new_order_data <- factor(factor_data, levels = c("East", "West",
    "North"))
print(new_order_data)
```

```
##  [1] East  West  East  North North East  West  West  West  East  North
## Levels: East West North
```

Nunc sodales, massa ut vehicula auctor, augue felis faucibus urna, et semper libero tortor accumsan magna. Proin non tortor quis erat tempor fermentum et ut tortor. Praesent elementum tristique sapien a interdum. Aenean sit amet mi a sapien semper ullamcorper. Phasellus quis enim tempor, porttitor odio eu, faucibus libero. Nullam eu eros vitae eros dictum luctus. Mauris congue ante vel laoreet eleifend.

1.5.2 Side-by-side log graphs

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hendrerit purus. Morbi posuere nibh erat, vel dignissim nisl fermentum sed. Vivamus nisi tellus, placerat vitae accumsan nec, tincidunt ac leo. Phasellus sed dolor et massa placerat sodales. Nulla facilisi. Sed sed justo nec lacus egestas malesuada hendrerit quis ligula. Vestibulum in purus mattis, elementum quam sit amet, eleifend lorem. Nunc dictum ligula ante, sit amet auctor nisi aliquet non. Donec ullamcorper ultrices molestie.

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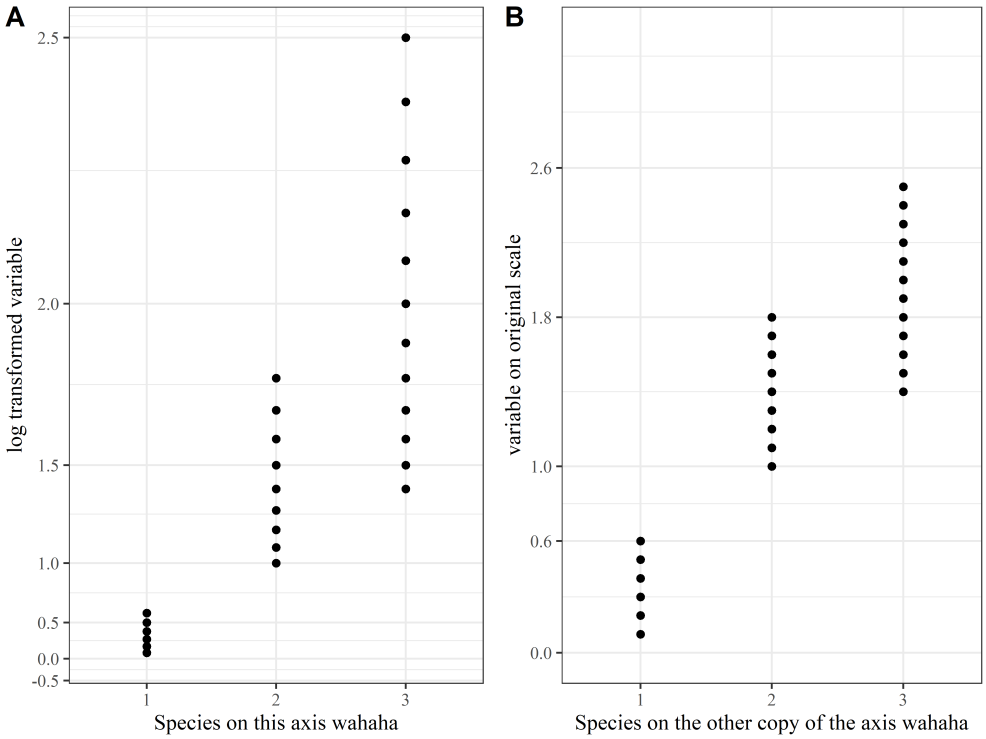

(#fig:two_log_norm_plot)Title of the plot above

1.5.3 Side by side different graphs, different fig. title

1.5.4 A tbl_summary example

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Plot without much thought or meaning

= 50	Verginica, N = 50	Versicolor, N = 50	
Numeric representation of species			
1	50 (100%)	0 (0%)	0 (0%)
2	0 (0%)	0 (0%)	50 (100%)
3	0 (0%)	50 (100%)	0 (0%)
These are the width of the petals	0.20 (0.20, 0.30)	2.00 (1.80, 2.30)	1.30 (1.20, 1.50)
These are the length of the petals	1.50 (1.40, 1.58)	5.55 (5.10, 5.88)	4.35 (4.00, 4.60)
These are the width of the sepals	3.40 (3.20, 3.68)	3.00 (2.80, 3.18)	2.80 (2.53, 3.00)
These are the length of the sepals	5.00 (4.80, 5.20)	6.50 (6.23, 6.90)	5.90 (5.60, 6.30)
This is a date column to illustrate transformations	2022-01-01 to 2022-02-19	2022-04-11 to 2022-05-30	2022-02-20 to 2022-04-10
This is my new example variable, adding up the lengths	3.70 (3.40, 3.90)	4.95 (4.63, 5.38)	4.20 (3.73, 4.40)
mock_ID	10.5 (6.0, 15.8)	10.0 (6.0, 14.0)	10.0 (5.5, 15.8)

Dis be the second table

mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
21	6	160	110	3.9	2.62	16.46	0	1	4	4
21	6	160	110	3.9	2.875	17.02	0	1	4	4

22.8	4	108	93	3.85	2.32	18.61	1	1	4	1
21.4	6	258	110	3.08	3.215	19.44	1	0	3	1
18.7	8	360	175	3.15	3.44	17.02	0	0	3	2
18.1	6	225	105	2.76	3.46	20.22	1	0	3	1

1.5.5 A raincloud plot

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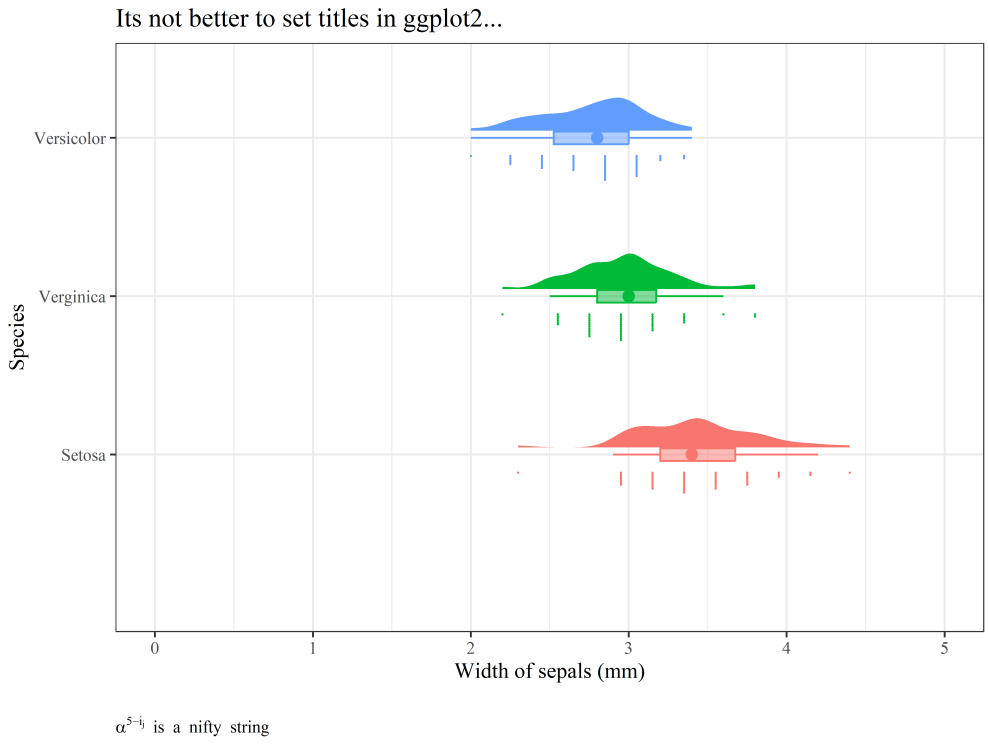

(#fig:raincloud_call)Raincloud plot(!)

1.5.6 Mixed model specification

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semper ullamcorper. Phasellus quis enim tempor, porttitor odio eu, faucibus libero. Nullam eu eros vitae eros dictum luctus. Mauris congue ante vel laoreet eleifend.

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These are some texts.

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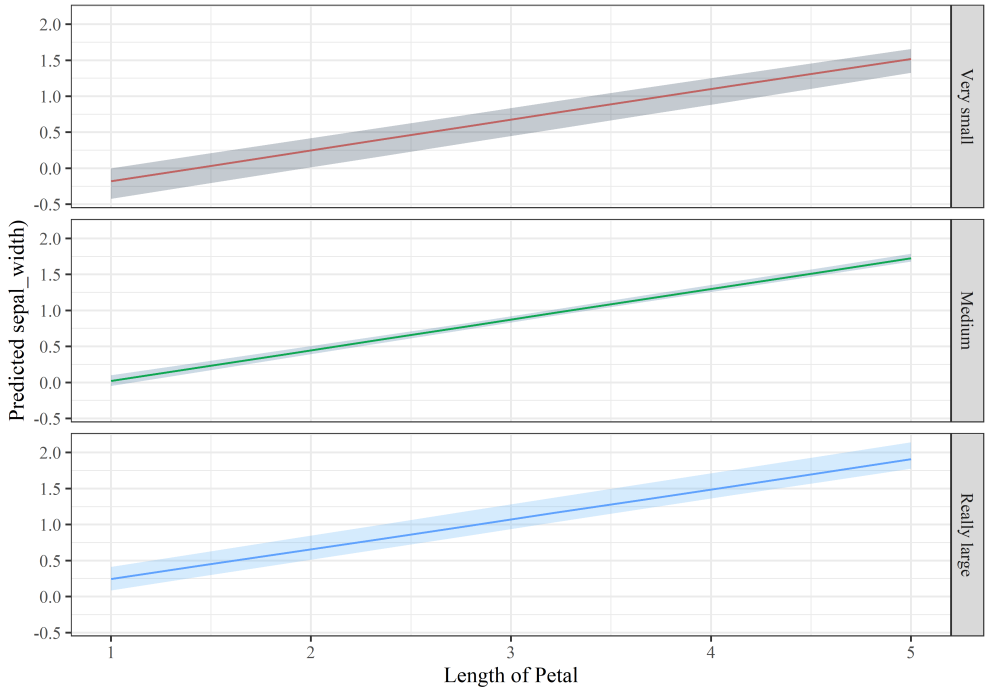
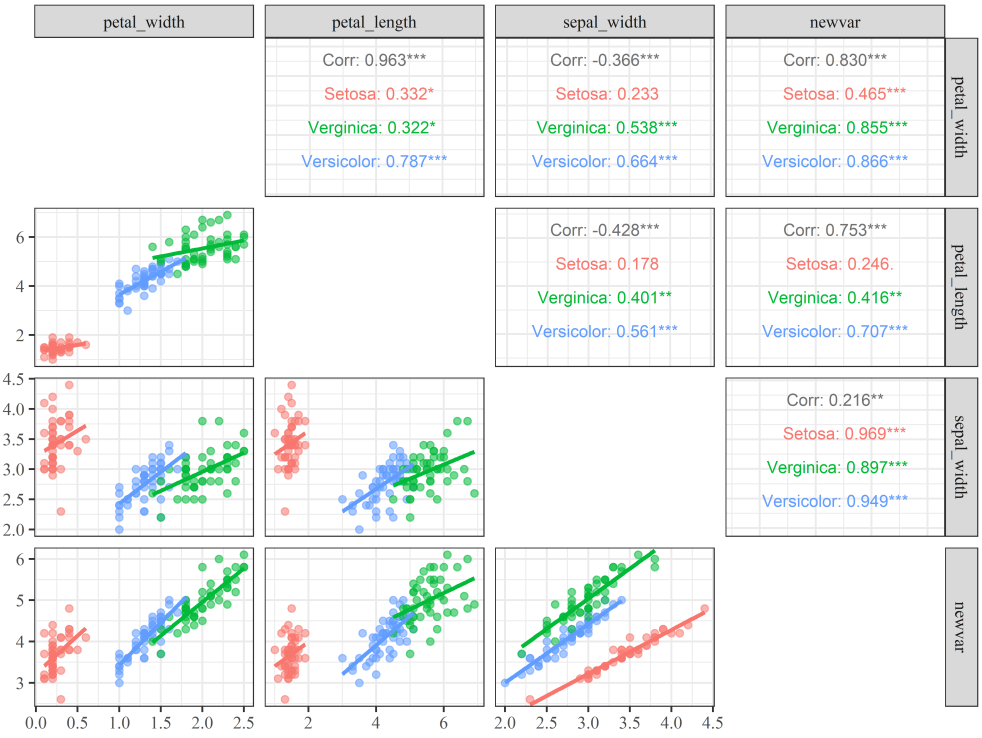
plottyplotting…



(#fig:lmer_predictions)lmer predictions with bootstrap and labelled facets



(#fig:ggpairs_plot)Especially Cool 'pairs' plot

1.5.7 cyl

1.5.7.1 Table

Frequency of cyl categories

	N = 32
cyl	
4	11 (34%)
6	7 (22%)
8	14 (44%)

1.5.7.2 Figures

És még hivatkozni is tudunk a(z) ???. ábrára.

1.5.8 gear

1.5.8.1 Table

Frequency of gear categories

	N = 32
gear	
3	15 (47%)
4	12 (38%)
5	5 (16%)

1.5.8.2 Figures

És még hivatkozni is tudunk a(z) ???. ábrára.

1.5.9 carb

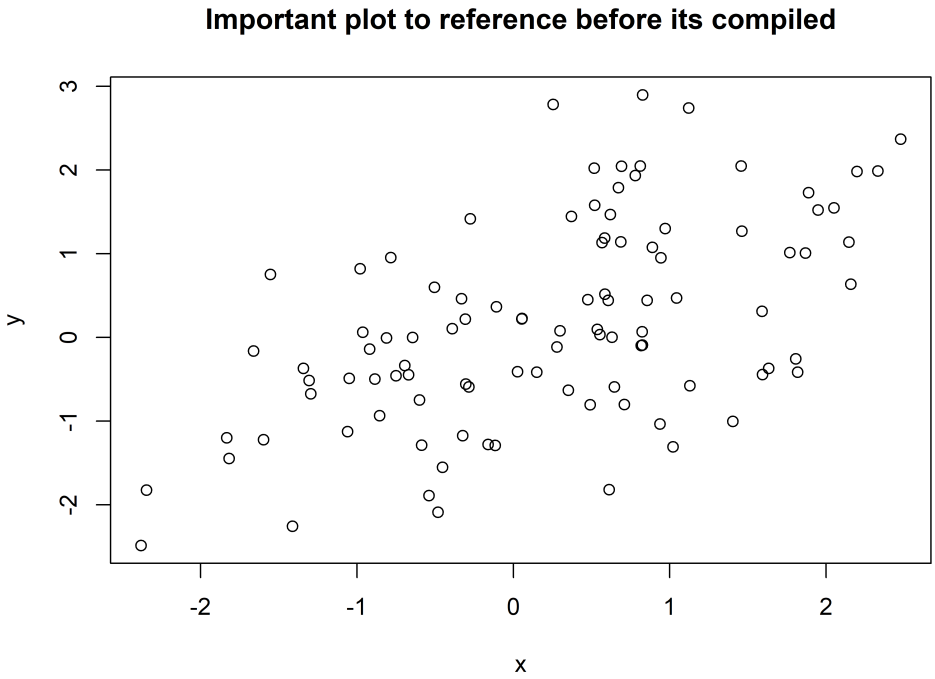
1.5.9.1 Table

Frequency of carb categories

N = 32	
carb	
1	7 (22%)
2	10 (31%)
3	3 (9.4%)
4	10 (31%)
6	1 (3.1%)
8	1 (3.1%)

1.5.9.2 Figures

És még hivatkozni is tudunk a(z) ???. ábrára.



(#fig:referenced_chunk)Executive graph for executive thoughts

2 Notes

The MD5 checksum of the database used:

```
## C:/OneDrive_DKM/-/Dinamikus Kiválóság Menedzsment - General/Stats_R/R/MartysCookbook/
##                                                                          "1ed4b9d54186
```

Other information regarding the compilation of this document:

Analyses were conducted using the R Statistical language (version 4.3.0; R Core Team, 2023) on Windows 10 x64 (build 19045), using the packages rmarkdown (version 2.22; Allaire J et al., 2023), lme4 (version 1.1.33; Bates D et al., 2015), Matrix (version 1.5.4.1; Bates D et al., 2023), effects (version 4.2.2; Fox J, Weisberg S, 2019), carData (version 3.0.5; Fox J et al., 2022), lubridate (version 1.9.2; Grolemund G, Wickham H, 2011), DHARMa (version 0.4.6; Hartig F, 2022), huxtable (version 5.5.2; Hugh-Jones D, 2022), MartysCookbook (version 0.2.0; Kiss M, ????), labelled (version 2.11.0; Larmarange J, 2023), emmeans (version 1.8.6; Lenth R, 2023), report (version 0.5.7; Makowski D et al., 2023), nlme (version 3.1.162; Pinheiro J et al., 2023), gtsummary (version 1.7.1; Sjoberg D et al., 2021), testthat (version 3.1.8; Wickham H, 2011), ggplot2 (version 3.4.2; Wickham H, 2016), readxl (version 1.4.2; Wickham H, Bryan J, 2023), roxygen2 (version 7.2.3; Wickham H et al., 2022), dplyr (version 1.1.2; Wickham H et al., 2023), formatR (version 1.14; Xie Y, 2023), knitr (version 1.43; Xie Y, 2023), pagedown (version 0.20; Xie Y et al., 2022) and kableExtra (version 1.3.4; Zhu H, 2021).

2.1 References

- Allaire J, Xie Y, Dervieux C, McPherson J, Luraschi J, Ushey K, Atkins A, Wickham H, Cheng J, Chang W, Iannone R (2023). *rmarkdown: Dynamic Documents for R*. R package version 2.22, https://github.com/rstudio/rmarkdown.
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This document was compiled at:

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[1] "2023-06-09 15:41:37 CEST"
```

3 Appendix

This is how put all your code into an appendix.

```
# https://dotcms.com/docs/latest/markdown-syntax
# https://yihui.org/knitr/options/
# https://zbib.org/
# https://www.r-bloggers.com/2019/09/first-world-problems-very-long-
        rmarkdown-documents/


# # For citations insert this into the yaml header (without spaces)
# # And make a book.bib file to the location of the mother .rmd
# bibliography: book.bib
# biblio-style: apalike
# link-citations: yes

source(here::here("inst","functions","load_stuff.r"))

knitr::opts_chunk$set(
    echo = FALSE,                              # Ne mutassa a kódokat
    cached = FALSE,                   ###!!!   # Ne cache-eljen
    warning = FALSE,                           # Ne írja ki a warningokat
    message = FALSE,
    fig.align = 'center',                      # Ábra középre rendezése
    out.width = '90%',                         # Ábra szélessége, alter.:
        #fig.fullwidth = TRUE,
    fig.asp = .75,                             # Ábra Hossz/szélesség
    tidy.opts = list(width.cutoff = 60),       # legyenek 60 karakter
        szélességűre tördelve
    tidy = "styler",                           # legyenek clean codingra
        megformázva
    dev = 'png',#'tiff',                               # PNG legyen az
        alapértelmezett képformátum
    compression = 'lzw',
    dpi = 300,                                 # a PNG képek elég jó
        minőségűek legyenek
    fig.pos = 'H'                              # nem próbálja az ábrákat az
        oldal tetejére tenni
  )


graphics_path <- "../inst/figure/"             # a máshonnan származó
        ábrák elérési útja
graphics_output_path <- "cookbook_files/figure-latex/" # az itt generált
        ábrák elérési útja

options(scipen = 1) # Require 5 instead of 4 for scientific notation
        (eg. for p-values)
options(digits = 3) # default no. of digits (!)
options(encoding = "UTF-8")

plot(x,y)

save.image( file = here::here("inst","states", "before_chap1.Rdata"))

valtozok <- c("cyl", "gear", "carb")
out <- NULL

for (i in 1:length(valtozok)) {
  out <- c(out, paste0("\n### ", valtozok[i], "\n")) # Defining "title"
  params <- list(x              = valtozok[i],
```