Cookbook

My Subtitle

Harci Marci

2118 november 20.

Date: _____ Signature: _____

Version control

v.0.1 – Draft version

1 Results

1.1 Executive summary

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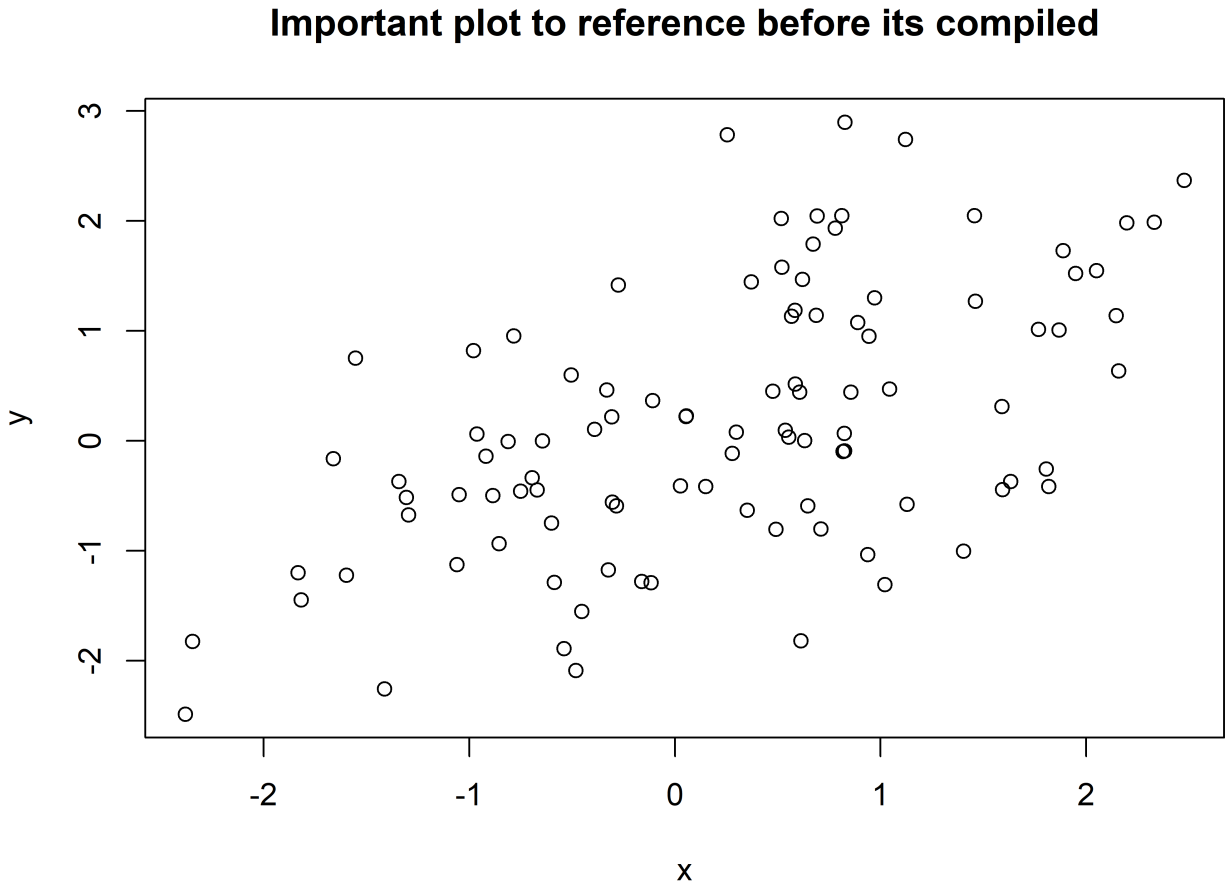

Executive graph for executive thoughts

1.2 Introduction

```
This is a text box if you like textboxes
```

Links can be given in this format (for html versions): link (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6852019/)

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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

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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
```

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1.5.2 Side-by-side log graphs

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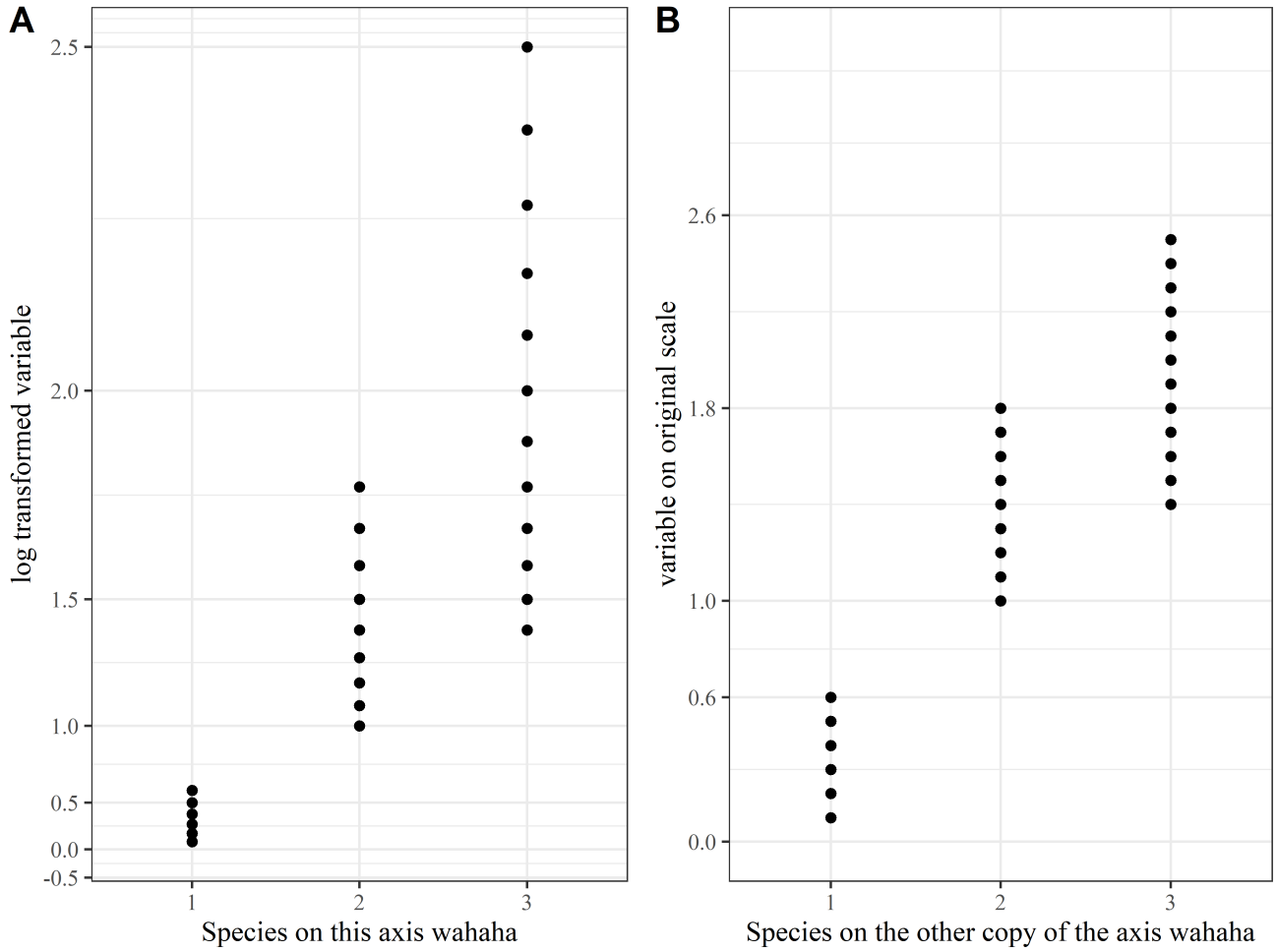

Title of the plot above

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

	Setosa, N = 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	8.0 (5.0, 14.0)	9.0 (4.0, 13.8)	9.0 (5.0, 13.8)

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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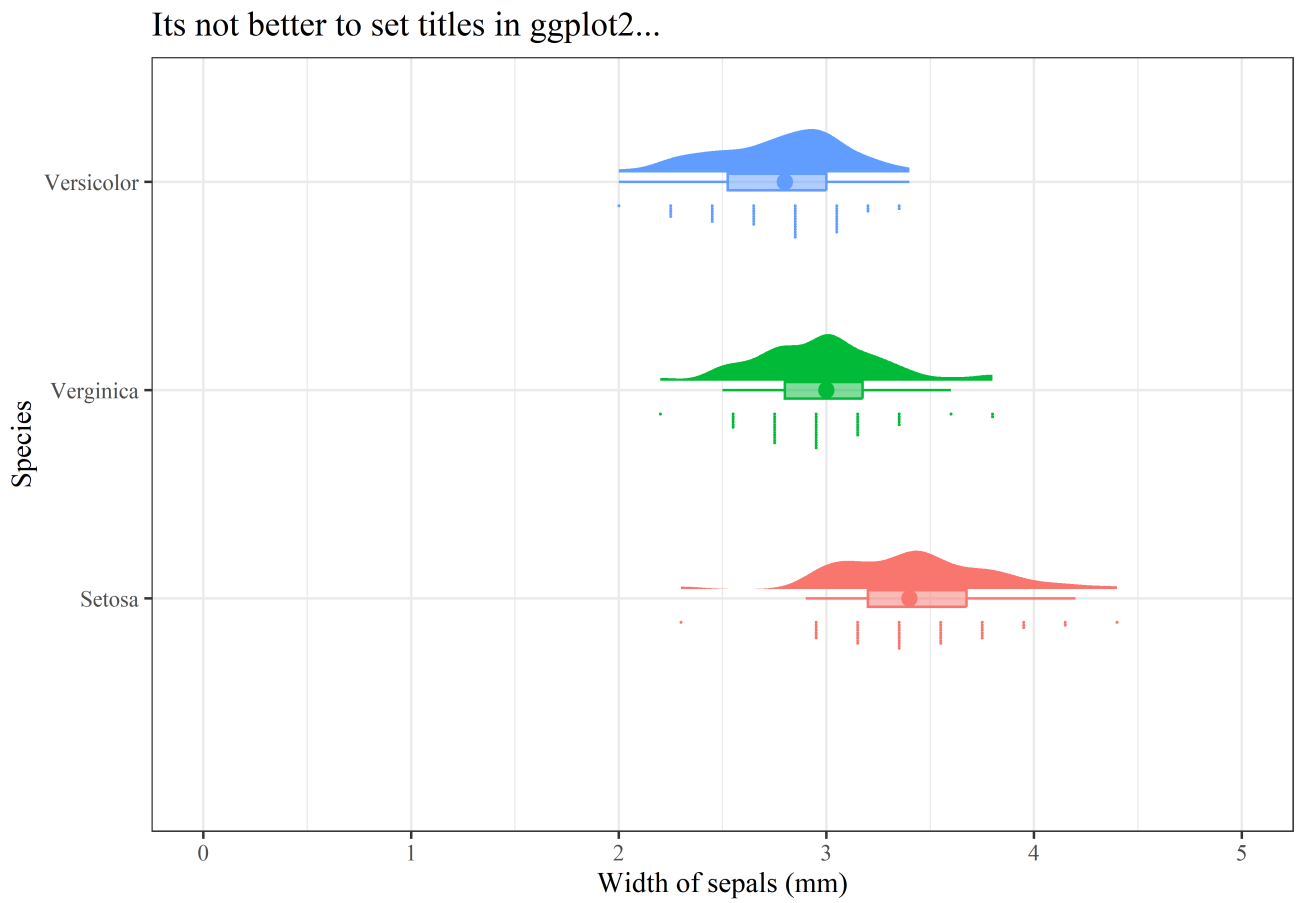

α^{5-i_j} is a nifty string

Raincloud plot(!)

1.5.6 Mixed model specification

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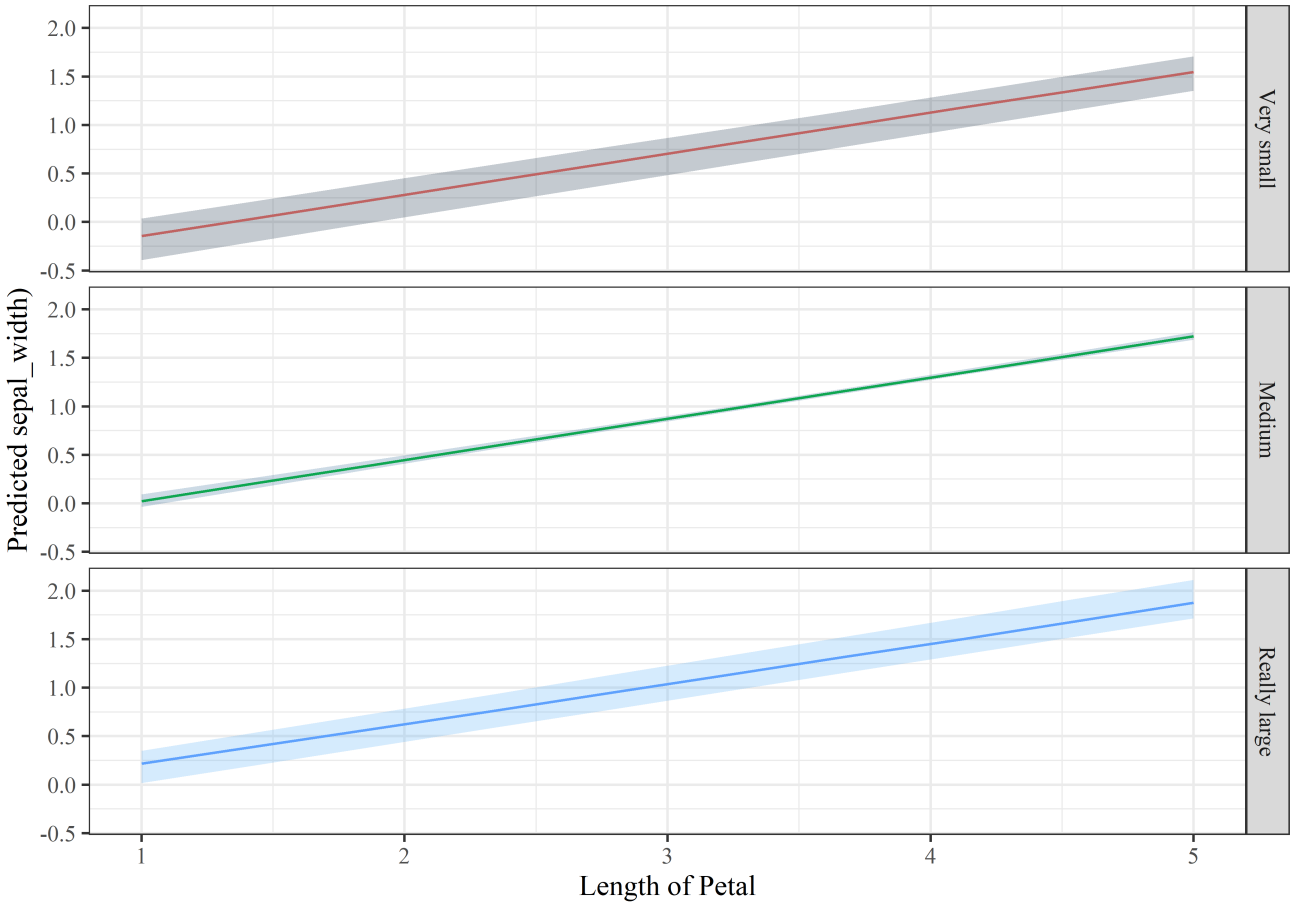
These are some texts.

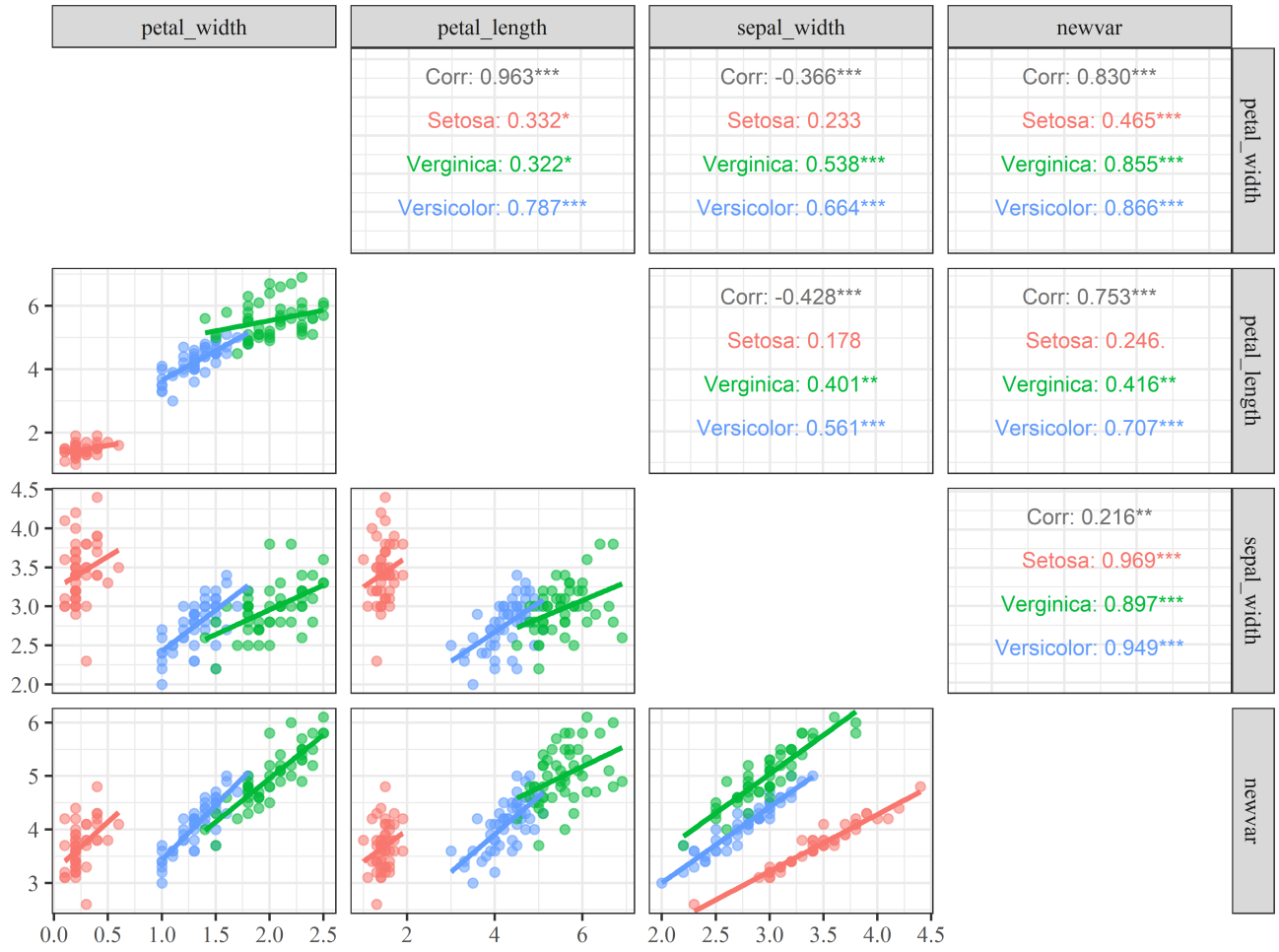
Cashycashing….

plottyplotting…



Confidence bands are conditional on the random effects(?)

lmer predictions with bootstrap and labelled facets



Especially Cool 'pairs' plot

Wise R sayings

author	quote
Barry Rowlingson	Okay, let's stand up and be counted: who has been writing diamond graph code? Mine's 60 lines.
Barry Rowlingson	Bug, undocumented behaviour, feature? I don't know. It all seems to work in 1.6.0, so everyone should downgrade now… :)
Robert Gentleman	I'm always thrilled when people discover what lexical scoping really means.
Ross Ihaka	My institution has a particularly diabolical policy on intellectual property, especially on software.
Paul Murrell	If you imagine that this pen is Trellis, then Lattice is not this pen.
Robert Gentleman	It is good to look around at what is available, but one shouldn't miss what is under one's nose either.
Robert Gentleman	What we have is nice, but we need something very different.
Barry Rowlingson	Readable, obvious, maintainable, 'portable' for some value of 'portable'…
Brian D. Ripley	'They' did write documentation that told you that Perl was needed, but 'they' can't read it for you.
Frank Harrell (SAS User, 1969-1991)	Overall, SAS is about 11 years behind R and S-Plus in statistical capabilities (last year it was about 10 years behind) in my estimation.
Peter Dalgaard	I want a budget.
Kevin Murphy	You can be maximally lazy, but still be efficient.
Andrew Thomas and Peter Green	Andrew Thomas: …and if something goes wrong here it is probably not WinBUGS since that has been running for more than 10 years…<x>Peter Green (from the back): … and it still hasn't converged!
Barry Rowlingson	This is all documented in TFM. Those who WTFM don't want to have to WTFM again on the mailing list. RTFM.
Brian D. Ripley	It really is hard to anticipate just how silly users can be.
Douglas Bates	So apparently you wish to report as a bug the fact that R 1.8.0 is different from R 1.4.0.
Ross Ihaka	I plan to fix this - the report is just in case I forget or get hit by a bus.
Thomas W. Blackwell and Brian D. Ripley	Thomas W. Blackwell: I just discovered to my surprise that I cannot define a function with an argument named 'break' or 'while'! <x>Brian D. Ripley: No, they are reserved names. […] Most programming languages have reserved words, so I am surprised you are surprised.
Brian D. Ripley	R has changed quite a lot recently, and older preconceptions do need to be checked against current information.
Brian D. Ripley	But a difference of a few minutes means that this is well under 20% of the total time unless your statistical analysis is very much speedier than mine.
Ross Ihaka	I seem to recall that we were targetting 512k Macintoshes. In our dreams we might have seen 16Mb Sun.

author	quote
Frank Harrell	I quit using SAS in 1991 because my productivity jumped at least 20% within one month of using S-Plus.
Rolf Turner	When a Certain Guru rips strips off people (God knows he's done it to me often enough) on this list, there's a damned good reason for it.
Barry Rowlingson	Ah, so that's why my report of a bug in the RCheapViagra package didn't get through….
Henrik Bengtsson and Brian D. Ripley	Henrik Bengtsson: Is there a way to turn off the (annoying) beep that occurs when one calls the locator() command and clicks the mouse? […]<x>Brian D. Ripley: It's a feature of the windows() device. Windows is fond of beeping, and I just mute the sound.
Brian D. Ripley and Patrick Burns	Brian D. Ripley: Add to package utils in R-devel, after correction. I was surprised you had fallen into the 1:0 trap.<x>Patrick Burns: I'm surprised too – good catch.
Knut M. Wittkowski	As to whether you can do a Lilliefors test for several groups, that depends entirely on your ability to understand what the underlying question would be (see Adams D 1979).
Jim Gustafsson and Frank Harrell	Jim Gustafsson: I would like to put my SAS-code into R. Could I do that, if yes, how?<x>Frank Harrell: Just reverse the procedure you use when you put R code into SAS. ;)
Brian D. Ripley	Is this English or American (you know, the language referred to in the USA as 'English')? […] As an English English speaker, my sense and my employer's dictionary both suggest doubling here.
Barry Rowlingson	As Brian says, there's nothing in the design that lets you do this, but then since you have the source there's nothing on the planet to stop you doing this. The design is not a law :)
Barry Rowlingson and Peter Dalgaard	Barry Rowlingson: Your grid above has 8*6 = 42 points.<x>(That was a subtle Hitchhikers Guide To The Galaxy reference there, honest, and not a stupid dumb multiplication mistake on my part after working four 18-hour days on the trot…)<x>Peter Dalgaard: […] Don't panic, just throw yourself at the ground and miss.
Douglas Bates	I have mentioned several times on this list that I'm in the process of developing a new and wonderful implementation of lme and I would prefer to continue working on that rather than modifying old-style code.
Ivo Welch and Brian D. Ripley	Ivo Welch: Thanks. I will put in a suggestion that the docs refer to q() in 'see also' for 'stop'.<x>Brian D. Ripley: I don't think anyone else is confusing 'exit' with 'stop', though. I hope you don't when driving ….
Douglas Bates	Before we get too carried away with this thread could you all please consider how the sd function calculates its result? […] I'll tell you, it takes the square root of the variance. How is the variance calculated for a numeric vector? First you calculate the mean *using floating point arithmetic* in which it is not necessarily true that N * k / N == k […] Most of those tests [for numerical accuracy] end in a check using the all.equal function which checks if the relative difference is less than a threshold. That's about the best that you can do with floating point arithmetic.<x>Here endeth the sermon.
Federico Calboli	The keyboard is the standard Italian layout, which is missing the ~ (tilde) key. […] Can anyone advice how to produce the ~ symbol, short of a copy/paste from MS Word?
Barry Rowlingson	I'd like to prefix all these solutions with 'Here's how to do it, but don't actually do it you crazy fool'. It's on a par with redefining pi, or redefining '+'. And then redefining '<-'. These techniques have their proper place, and that would be in the currently non-existent obfuscated R contest.<x>No, the R-ish (iRish?) way is to index vectors from 1. That's what the R gods intended!
John Fox	I think that it's generally a good idea not to resist the most natural way of programming in R.
Rolf Poalis, Biostatistics Denmark	For almost 40 years SAS has been the primary tool for statisticians worldwide and its easy-to-learn syntax, unsurpassed graphical system, powerful macro language and recent graphical user interfaces have made SAS the number one statistical software choice for both beginners and advanced users.
Peter Wolf	Sorting is a wonderful topic! Especially because you can discuss different fundamental ideas like brute force, divide and conquer, and questions of efficiency, tradeoffs of space and time, etc.
Douglas Bates and Ed L. Cashin	Douglas Bates: If you really want to be cautious you could use an octal representation like sep="\007" to get a character that is very unlikely to occur in a factor level.<x>Ed L. Cashin: I definitely want to be cautious. Instead of the bell character I think I'll use the field separator character, "\034", just because this is the first time I've been able to use it for it's intended purpose! ;)<x>Douglas Bates: Yes, but with "\034" you don't get to make obscure James Bond references :-)
Bret Collier and Peter Dalgaard	Bret Collier: I hope this is not a uniformed question, but I am a little lost.<x>Peter Dalgaard: Don't worry, they all look alike… ;-)
Peter Dalgaard	I was actually reading it with some curiosity as to how they managed to find 5 locations that were close to everyone on R-help…
Dirk Eddelbuettel	My preference goes with the numbering scheme attributed to a tribe on some island in the Pacific which consists of a 'factor' with four levels: 'one', 'two', 'three', and 'lots'. Hence, I'd go with 'lots of R users'.
David Whiting	The Huli of Papua New Guinea use '15' to mean a very large number and '15 times 15 samting (something)' to mean something close to infinity.
Brian D. Ripley	It seems to me against the spirit of Open Source software to attempt to monitor distribution. We could ask R to 'call home' on first use (in the way e.g. pine does) but I suspect many users would find that objectionable.
Duncan Murdoch	Maybe you should contact Microsoft, and get them to modify their tools so they work on the R sources?
Anthony Rossini	Seldom are prizes, credit, and gratitude given, else Brian would be drowning in them.
Detlef Steuer	Release 1.0.0<x>(silence)<x>Wow! Thank you! […] If I am allowed to ask just one question today: How do you fit 48 hours of coding in an ordinary day? Any hints will be appreciated … :-)
John Fox	If you give people a linear model function you give them something dangerous.
Brian D. Ripley	To paraphrase provocatively, 'machine learning is statistics minus any checking of models and assumptions'.

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

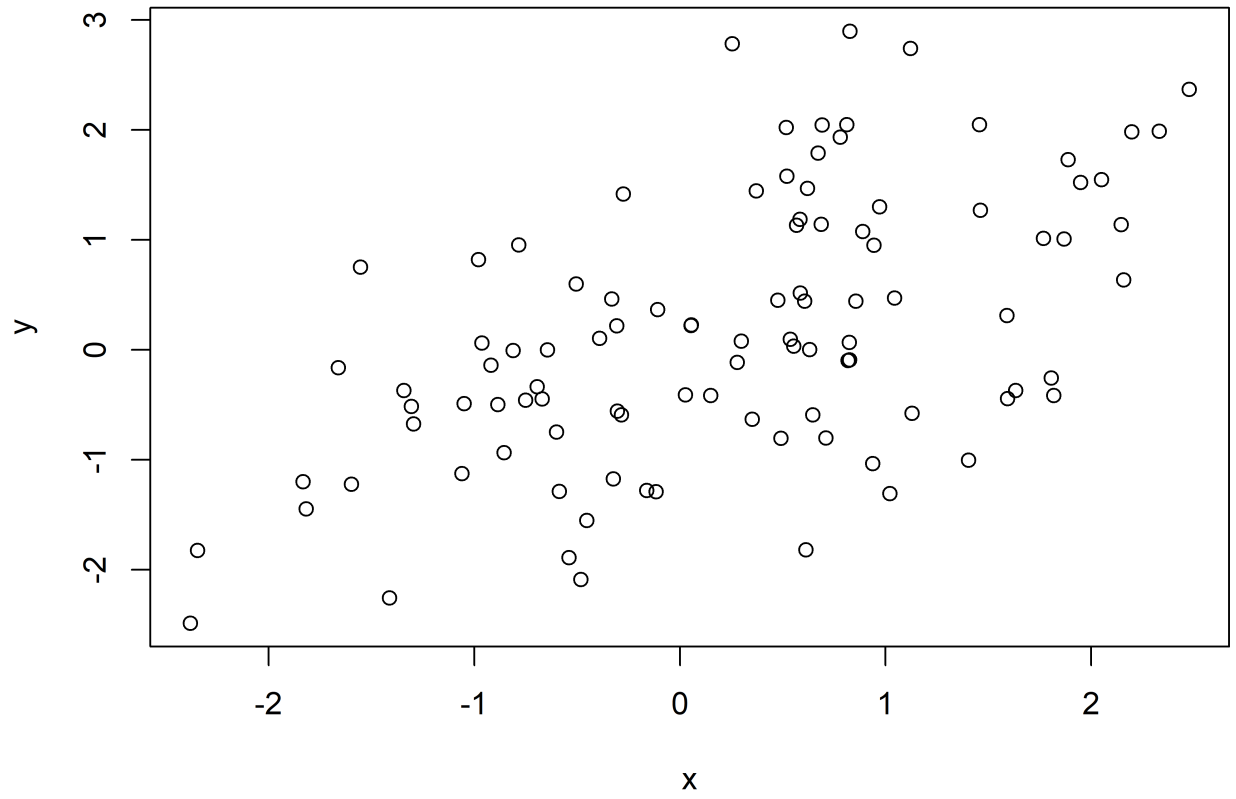
1.5.9.1 Table

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.



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/inst/extdata/Iris.xls
##                                                                  "1ed4b9d5418675e017479de339aff352"
```

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 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), labelled (version 2.11.0; Larmarange J, 2023), emmeans (version 1.8.6; Lenth R, 2023), nlme (version 3.1.162; Pinheiro J et al., 2023), gtsummary (version 1.7.1; Sjoberg D et al., 2021), 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) and knitr (version 1.43.1; Xie Y, 2023).

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This document was compiled at:

```
[1] "2023-06-07 12:55:19 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"))
source(here::here("inst","functions", "wrangling.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/figures/"            # 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],
                 top_level      = 4,
                 figname_prefix = valtozok[i])
  out <- c(out,
           knitr::knit_child(here::here("inst",'cyclic_chap2.Rmd'),
                             quiet = T))
}
out <- paste(out, collapse = "\n")

set.seed(12345)

x <- rnorm(100)
y <- 0.5 * x + rnorm(100)

plot(x,y, main = "Important plot to reference before its compiled")

tools::md5sum(here::here("inst","extdata","Iris.xls"))
knitr::opts_chunk$set(comment = NA)
sessionInfo() %>% report::report() %>% cat()

Sys.time()
save.image(file = here::here("inst","states","cookbook_out.Rdata"))
```

```r
source(here::here("R","load_stuff.r"))
load( file = here::here("inst","states", "before_chap1.Rdata"))

# 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)

# 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)



# First subplot
fig_1a <-
data %>%
  ggplot( aes( x = species_no,
               y = petal_width)) +
  # Theme
  theme_default_ggplot +
  # Layers
  geom_point() +
  # axis wrangling
  scale_y_continuous(
    # setting up a custom log transform ( the pre-defined results in error somehow...)
    trans = scales::trans_new("expmar", exp,
             function(x){
                 #print(paste("isq",x))  #debug statement
                 x <-ifelse(x<0, 0, x)
                 log(x)
               })
  ) +
  # description(s)
  labs( x = "Species on this axis wahaha",
        y = "log transformed variable")


# Second subplot
fig_1b <-
data %>%
  ggplot( aes( x = species_no,
               y = petal_width)) +
  # Theme
  theme_default_ggplot +
  theme( legend.position="bottom") + # custom legend position if needed
  # Layers
  geom_point() +
  # axis wrangling
  scale_y_continuous(
    limits = c( 0,3.3),
    breaks = c( 0, .6, 1, 1.8, 2.6)
  ) +
  # description(s)
  labs( x = "Species on the other copy of the axis wahaha",
        y = "variable on original scale")

# Demonstrating arranging plots
fig_1comp <-
  ggpubr::ggarrange(fig_1a, fig_1b,
           #labels = c("", ""), # if you'd like to omit the labels
           labels = "AUTO",
           ncol = 2, nrow = 1)
```

```
# calling the plot
(fig_1comp)


data_local <- data.frame( x = rnorm(100)) %>%
                mutate(y = x * 0.5 + rnorm(100))

data_local %>%
  ggplot( aes(x=x,y=y)) +
    theme_default_ggplot +
    geom_point()

hist(data_local$x)



tbl_summary( data, by = species_char) %>%
  martys_table_style(caption. =
                       "Plot without much thought or meaning") %>%
  # You can 'overwrite' setting which don't conflict your defaults
  set_font_size(7) %>%
  ###### row_spec(0, bold = T, font_size = 7)# %>% # Dis crashes the whole thing
   set_width(.4)


head(mtcars) %>%
  martys_table_style(caption. = "Dis be the second table")



# Calling the plot
plot. <-
  data %>%
    ggplot( aes(x = species_char, y = sepal_width,
                color = species_char, fill = species_char)) +
    theme_default_ggplot +
    # half smoothed density
    ggdist::stat_halfeye(
      ## bandwidth
      adjust = 0.6,
      justification = -.2,
      .width = 0,
      width = .25
    ) +
    # Boxplot
    geom_boxplot( width = .08,
                  # remove outliers from boxplot
                  outlier.color = NA,
                  alpha = .5) +
    # Dotplot
    ggdist::stat_dots(
      side = "left",
      dotsize = .1,
      justification = 1.12,
      binwidth = .125
    ) +
    labs(
      # coord_flip doesn't affect this ;)
      x = "Species",
      y = "Width of sepals (mm)",
      # Including latex, see https://cran.r-project.org/web/packages/latex2exp/vignettes/using-latex2exp.html
      caption = latex2exp::TeX(r"($   \alpha^{5-i_j}\ is\ a\ nifty\ string   $)"),
      title = "Its not better to set titles in ggplot2..."
      ) +
    scale_y_continuous(
      breaks = c(0,1,2,3,4,5),
      limits = c(0,5)) +
    coord_flip()


(plot.)
```

```
library(lme4)

mod <- lmer(
  petal_width ~
    petal_length +
    sepal_width +
    (1 | mock_ID),
  data
)


#Output is in html...
sjPlot::tab_model(mod,
    # transform = "exp", # makes stuff multiplicative
    digits.re = 3,
    show.reflvl = TRUE,
    pred.labels = list(
      `(Intercept)` = "Interceeeeept",
      petal_length  = "Length of petal",
      sepal_width   = "Width of sepal"
    ),
    dv.labels = "Width of petal (mm)",
    df.method = "kr", # makes it somewhat more conservative I guess
    title = "Specification of an lmer model"
    , show.p = FALSE # if you're also skeptical of p-values
    , bootstrap = TRUE
    , iterations = 100 # actually works for lmer(!)
    , file = here::here("inst","stuff","temp.html") # have to export temporarily
  )


  # The "webshot2" stuff needs to be done 'invisibly' or else it
  # spawns a copy of the previous image
invisible({
  #taking a 'snapshot' of the html and converting it to .png
  webshot2::webshot(url=here::here("inst","stuff","temp.html"),
                    cliprect = c(0,0,400,400),
                    file = here::here("inst","figures","webshot.png"))
})



# How to predict an lmer model's main effects based on bootstrap
# slow as it gets if you like it pretty, introducing cache

CRANK <- 30

pred <- expand.grid(
  petal_length = seq(1, 5, length.out = 10),
  sepal_width  = seq(1, 5, length.out = 3)
)

pred_out <- ciTools::add_ci(pred, mod,
  includeRanef = FALSE, type = "boot",
  nSims = CRANK # crank up in production
)

# fig.show='hide'

plot_lmeoutpred <-
  pred_out %>%
    mutate(
      # Recoding into factor the facetting value, labels will be based on the labels...
      sepal_width2 = factor( sepal_width, labels = c("Very small",
                                                     "Medium",
                                                     "Really large"))) %>%
    ggplot( aes(x = petal_length, y = pred,
                group = sepal_width2, color = sepal_width2
                , fill = sepal_width)) +
```

```
    theme_default_ggplot +
    geom_line() +
    geom_ribbon(mapping = aes( ymin = LCB0.025,
                               ymax = UCB0.975),
                alpha = .25,
                colour = NA) +
    facet_grid( facets = c("sepal_width2"), labeller = label_value) +
    labs( x = "Length of Petal",
          y = "Predicted sepal_width)",
          caption = "Confidence bands are conditional on the random effects(?)")

plot_lmeoutpred

#|fig.cap="lmer predictions with bootstrap and labelled facets",
#|fig.keep ='all'
#|

(plot_lmeoutpred)


# The below is an analogue of pairs()

plot_ggpairs <-
  data %>%
    select(c(
      "petal_width",  "petal_length", "sepal_width", "newvar", "species_char"
    )) %>%
    GGally::ggpairs( .,
             aes(color = species_char, alpha = 0.5),
             columns = 1:4,
             upper = list(continuous = GGally::wrap("cor", size = 3)),
             diag =  list(continuous = "blankDiag"),
             lower = list(continuous = GGally::wrap( "smooth",
                                                     se = FALSE,
                                                     method = "lm")),
             progress = FALSE) +
      theme_default_ggplot


(plot_ggpairs)


# ## Doesn't work in pdf output(?)
#
# library(leaflet)
#
# leaflet(width = "100%") %>%
#   addProviderTiles("CartoDB.Positron") %>%
#   setView(lat = -27.45, lng = 153.075, 10) %>%
#   addMarkers(lat = -27.45321, lng = 153.0919745, label = "ACC") %>%
#   addMarkers(lat = -27.452607, lng = 153.029548, label = "MLA") %>%
#   addMarkers(lat = -27.589169, lng = 153.107316, label = "Teys")


# TODO: kableExtra just wont knit!! NO idea why.

require(kableExtra)

fortunes::read.fortunes() %>%
  .[1:50,c(2,1)] %>%
  # Sometimes you have to specify everything if you want to deviate
  # from the standard look (here: do a longtable)
  kable(#format = "latex", # Pivoting to 'html'
                    longtable = TRUE, # Doesn't work with scale_down
                    booktabs = TRUE,
                    linesep = "",
                    caption = "Wise R sayings",
                    align = "c") #%>%
  #row_spec(0, bold = T) #%>%
  #kable_styling( position = "center",
  #               latex_options = c("striped","repeat_header"
```

```
  #                                 #,"scale_down"
  #                                 ),
  #                stripe_color = "gray!05") %>%
  #landscape() %>%
  #column_spec(column = 2, width = "50em") %>%
  # kable_styling(font_size = 7)



# Defining stuff, including the renaming scheme, and the structure of the output


source(here::here("R","load_stuff.r")) # for independent compilation
load( file = here::here("inst","states", "before_chap2.Rdata"))

if(!exists("child_counter")) {
  child_counter <- 1
} else {
  child_counter <- child_counter + 1
}

knitr::opts_chunk$set(fig.process = function(x) {
  x2 = sub(paste0(knitr::opts_current$get("label"), '-'), '', x, fixed = T)
  if (file.rename(x, x2)) x2 else x
})

my <- list()
my$table <- t(table(params$x))
rownames(my$table) <- c("Darabszámok")

mtcars[[params$x]] %>%
  as.data.frame %>%
  `colnames<-`(params$x) %>%
  tbl_summary() %>%
  martys_table_style(caption. = paste0("Frequency of ",params$x," categories"))

child_counter <- child_counter + 1

mtcars %>%
  ggplot( aes(x = mpg,
          y = .data[[params$x]])) +
  theme_default_ggplot +
  geom_point()

mtcars %>%
  ggplot( aes(x = qsec,
          y = .data[[params$x]])) +
  theme_default_ggplot +
  geom_point()

rm(my)

knitr::opts_chunk$set(fig.process = NULL)

# Defining stuff, including the renaming scheme, and the structure of the output


source(here::here("R","load_stuff.r")) # for independent compilation
load( file = here::here("inst","states", "before_chap2.Rdata"))

if(!exists("child_counter")) {
  child_counter <- 1
} else {
  child_counter <- child_counter + 1
}

knitr::opts_chunk$set(fig.process = function(x) {
  x2 = sub(paste0(knitr::opts_current$get("label"), '-'), '', x, fixed = T)
  if (file.rename(x, x2)) x2 else x
})
```

```
my <- list()
my$table <- t(table(params$x))
rownames(my$table) <- c("Darabszámok")

mtcars[[params$x]] %>%
  as.data.frame %>%
  `colnames<-`(params$x) %>%
  tbl_summary() %>%
  martys_table_style(caption. = paste0("Frequency of ",params$x," categories"))

child_counter <- child_counter + 1

mtcars %>%
  ggplot( aes(x = mpg,
          y = .data[[params$x]])) +
  theme_default_ggplot +
  geom_point()

mtcars %>%
  ggplot( aes(x = qsec,
          y = .data[[params$x]])) +
  theme_default_ggplot +
  geom_point()

rm(my)

knitr::opts_chunk$set(fig.process = NULL)

# Defining stuff, including the renaming scheme, and the structure of the output


source(here::here("R","load_stuff.r")) # for independent compilation
load( file = here::here("inst","states", "before_chap2.Rdata"))

if(!exists("child_counter")) {
  child_counter <- 1
} else {
  child_counter <- child_counter + 1
}

knitr::opts_chunk$set(fig.process = function(x) {
  x2 = sub(paste0(knitr::opts_current$get("label"), '-'), '', x, fixed = T)
  if (file.rename(x, x2)) x2 else x
})

my <- list()
my$table <- t(table(params$x))
rownames(my$table) <- c("Darabszámok")

mtcars[[params$x]] %>%
  as.data.frame %>%
  `colnames<-`(params$x) %>%
  tbl_summary() %>%
  martys_table_style(caption. = paste0("Frequency of ",params$x," categories"))

child_counter <- child_counter + 1

mtcars %>%
  ggplot( aes(x = mpg,
          y = .data[[params$x]])) +
  theme_default_ggplot +
  geom_point()

mtcars %>%
  ggplot( aes(x = qsec,
          y = .data[[params$x]])) +
  theme_default_ggplot +
  geom_point()

rm(my)
```

```
knitr::opts_chunk$set(fig.process = NULL)
```