R+RStudio Tips and Tricks

Hidden gems for improving workflow efficency

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dplyr::glimpse(aswan)

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- Founder of Sensolution.ID
- Expertise in sensory science and consumer studies
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  - Master in Sensory Science, Wageningen University and Research, The Netherlands
  - Bachelor in Food Technology, Universitas Brawijaya, Indonesia
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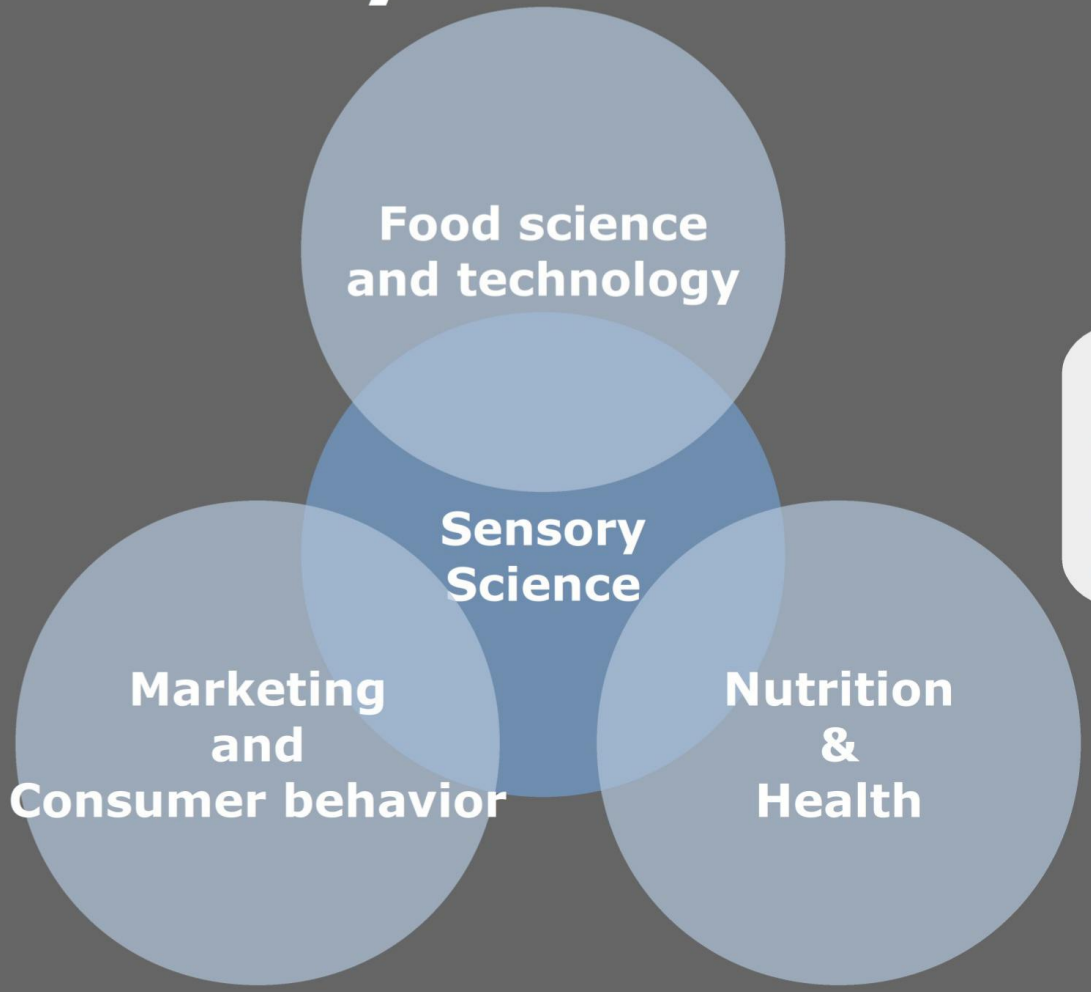
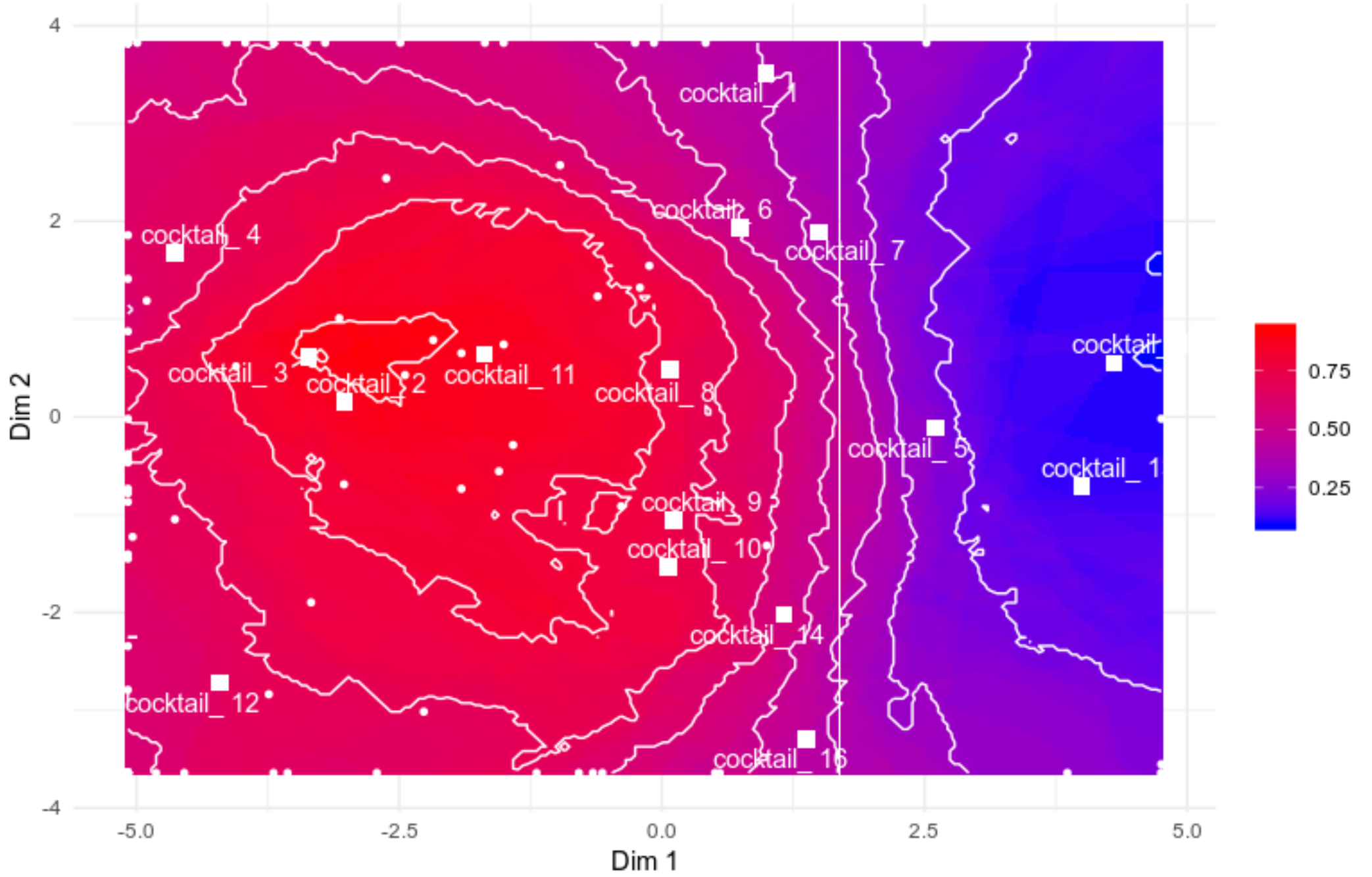
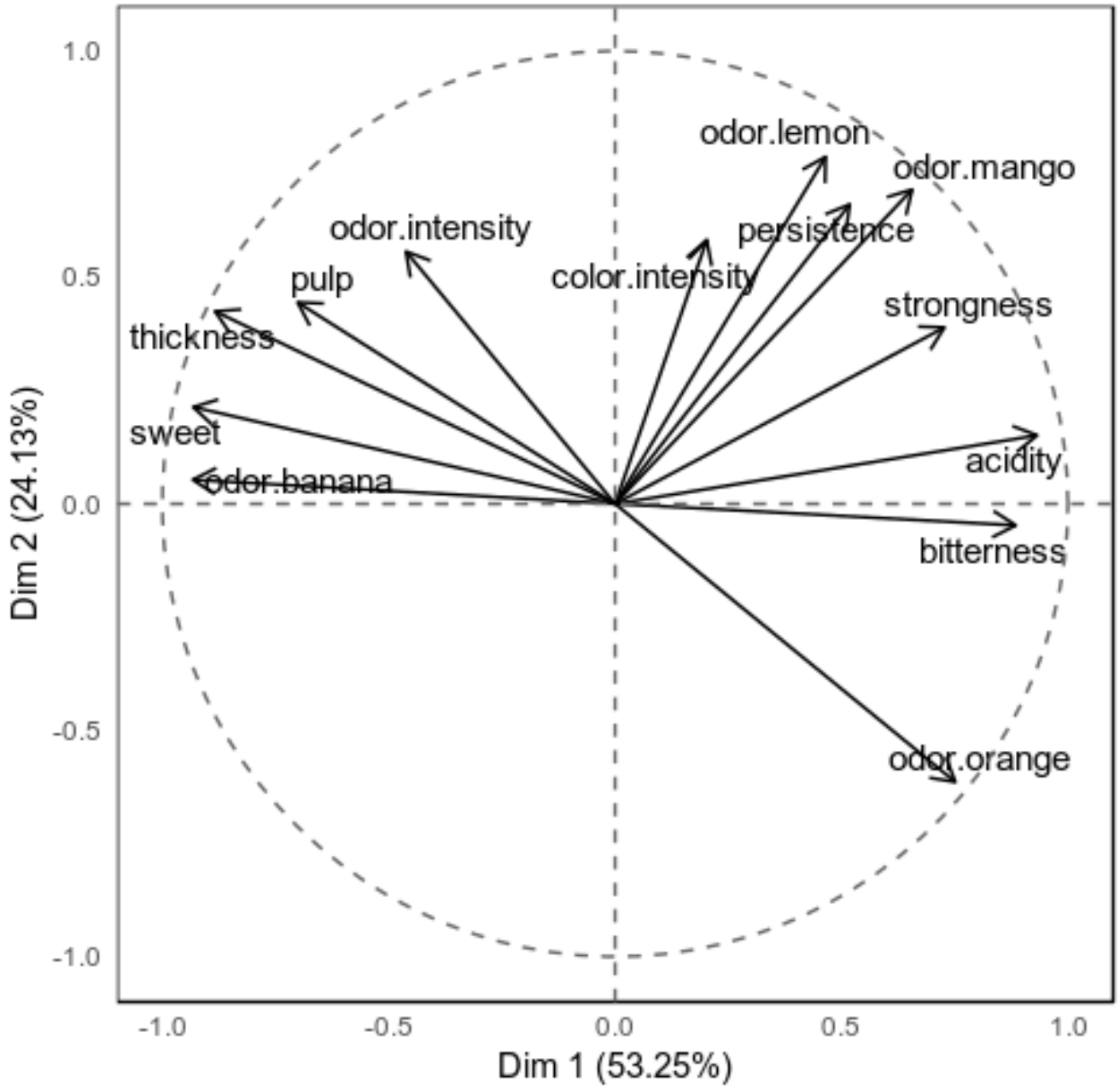
Sensory Science ~ Food + Consumer Perception

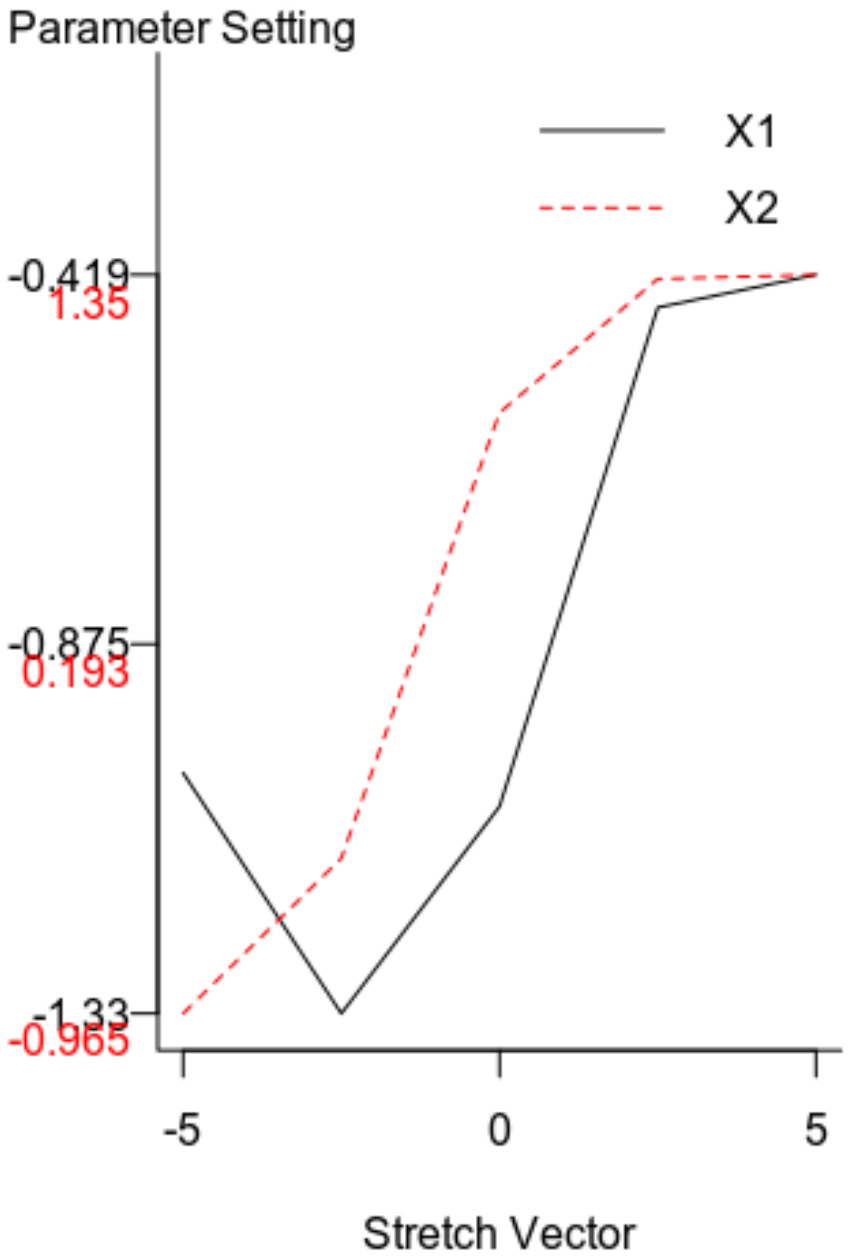


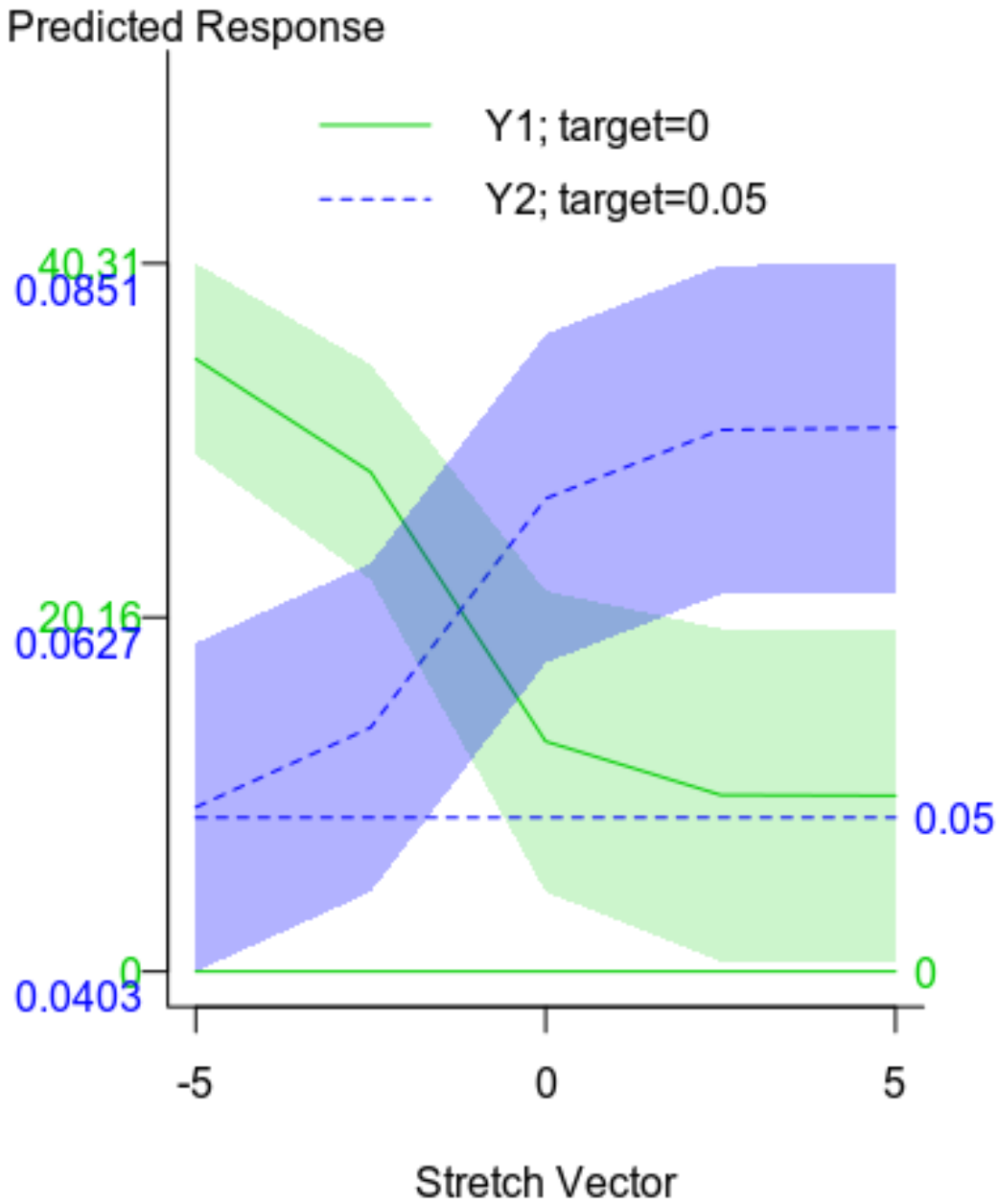
Sensory food research aims to reach a better understanding of how the senses respond to food and eating, but also how our senses can be used in quality control and product design. - WUR

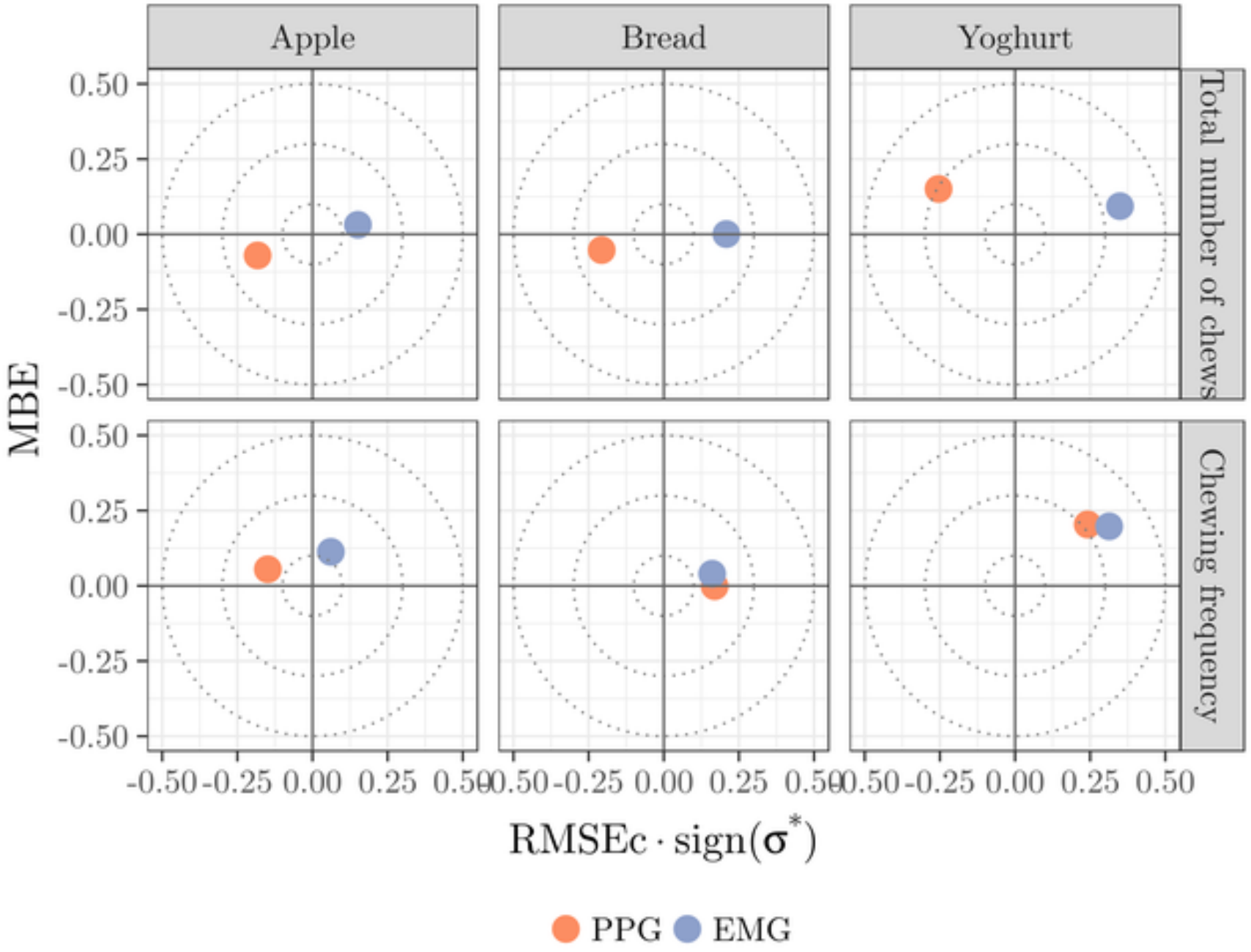
dplyr::summarise(me_with_r)


cocktail_ 1
cocktail_ 6
cocktail_ 7
cocktail_ 4
cocktail_ 3
cocktail_ 2
cocktail_ 11
cocktail_ 8
cocktail_ 5
cocktail_ 1
cocktail_ 9
cocktail_ 10
cocktail_ 14
cocktail_ 12
cocktail_ 16
0.75
0.50
0.25
Dim 2
Dim 1
4
2
0
-2
-4
-5.0
-2.5
0.0
2.5
5.0


odor.lemon
odor.mango
odor.intensity
persistence
color.intensity
pulp
strongness
thickness
sweet
acidity
odor.banana
bitterness
odor.orange
1.0
0.5
0.0
-0.5
-1.0
Dim 2 (24.13%)
-1.0
-0.5
0.0
0.5
1.0
Dim 1 (53.25%)


Parameter Setting
X1
X2
-0.419
1.35
-0.875
0.193
-1.33
-0.965
-5
0
5
Stretch Vector


Predicted Response
Y1; target=0
Y2; target=0.05
40.31
0.0851
20.16
0.0627
0
0.0403
0.05
0
-5
0
5
Stretch Vector


Apple
Bread
Yoghurt
Total number of chews
Chewing frequency
MBE
0.50
0.25
0.00
-0.25
-0.50
-0.50 -0.25 0.00 0.25 0.50
RMSEc · sign(σ*)
PPG
EMG

Uji Diskriminasi

Jumlah Jawaban Benar

76

Jumlah Percobaan

100

Metode

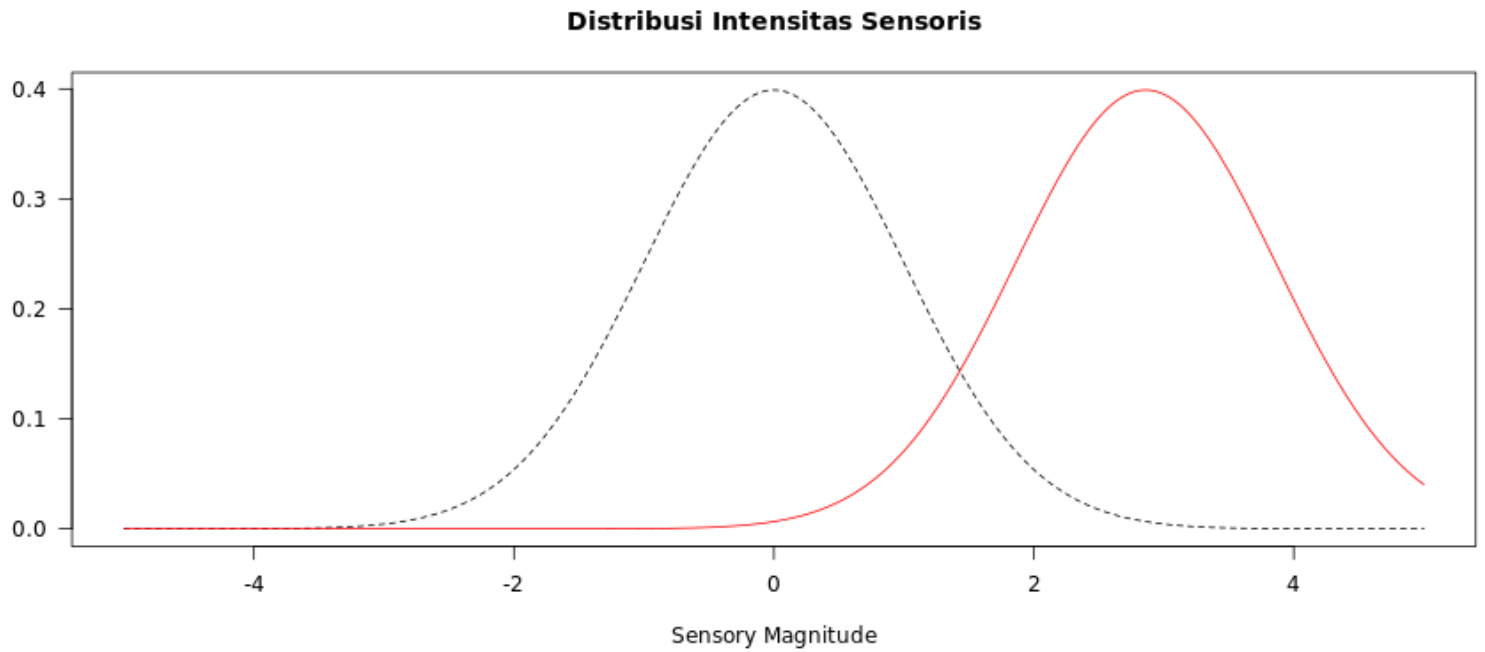
- ○ 2-AFC
- ○ 3-AFC
- ○ Duo-Trio
- ◉ Triangle
- ○ Tetrad
- ○ Hexad
- ○ Two-out-of-Five

Analisis

```
Estimat untuk uji Triangle dengan 76 jawaban benar dari total 100 percobaan

                              Estimat Std. Error 95%CI bawah 95%CI atas
Probabilitas Jawaban Benar (pc)    0.76       0.04        0.66       0.84
Proporsi Diskriminator (pd)        0.64       0.06        0.50       0.76
d-prime                            2.86       0.27        2.31       3.43

 Hasil uji diskriminasi:
 'exact' binomial test: p-value =  0
 Hipotesis alternatif: nilai d-prime lebih besar dari 0
```



R tips and tricks

Some tips

- Learn R using R

```
install.packages("swirl")
```

- `Ctrl + Enter` on example code
- `x <- rnorm(100)` versus `(x <- rnorm(100))`
- For repetitive task

```
install.packages("usethis")
```

Some tips

- Play with `.RProfile`

```
message("Hi your_name, welcome to R!")
if(interactive()) {
  suppressMessages(require(usethis))
  try(fortunes::fortune(), silent = TRUE)
}

options(
  prompt = "indo-R > ",
  continue = "   ",
  useFancyQuotes = FALSE,
  max.print = 100
)
```

- Coding style
  - Google's R style guide, or
  - The tidyverse style guide

RStudio hidden gems

Outline

- RStudio project, use version control!
- Installing and updating package, hit `Tools` menu
- Using source editor (R script, Rmarkdown)
  - Use section for R script, `Ctrl + Shift + R`
  - Please name your chunks!
- Setup Global Options
  - Do not save or load `.Rdata`
  - Adjust pane layout, console to right
  - Change theme and font, e.g. `Fira Code` font family
- The friendly `Tab`
  - File navigation
  - Autocompletion
- Handy shortcuts
- Addins
  - `syler`
  - `datapasta`
  - `reprex`
  - `clipr`
  - `ggThemeAssist`
- Cheatsheets, hit `Help - Cheatsheets`

Handy shortcuts

- `Alt + -`, for assignment operator `<-`
- `Ctrl + Shift + M`, for pipe operator `%>%`
- `Ctrl + Enter`, run example on help page
- `Ctrl + Shift + [number]`, change focus
- `Ctrl + Up`, search for code history on console or editor pane
- `Alt + Up/Down`, move code to above or below
- `Alt + Shift + Up/Down`, copy code to above or below
- `Ctrl + D`, delete current line
- `Ctrl + I`, reindent code
- `Ctrl + Shift + A`, reformat code
- `Ctrl + Shift + F10`, restart R session
- `Ctrl + Alt + B`, run code up to current line
- `Ctrl + .`, find file
- `Alt + Shift + K`, shortcuts quick reference

Thanks!