BCS_RSA_Color_Norming_Native
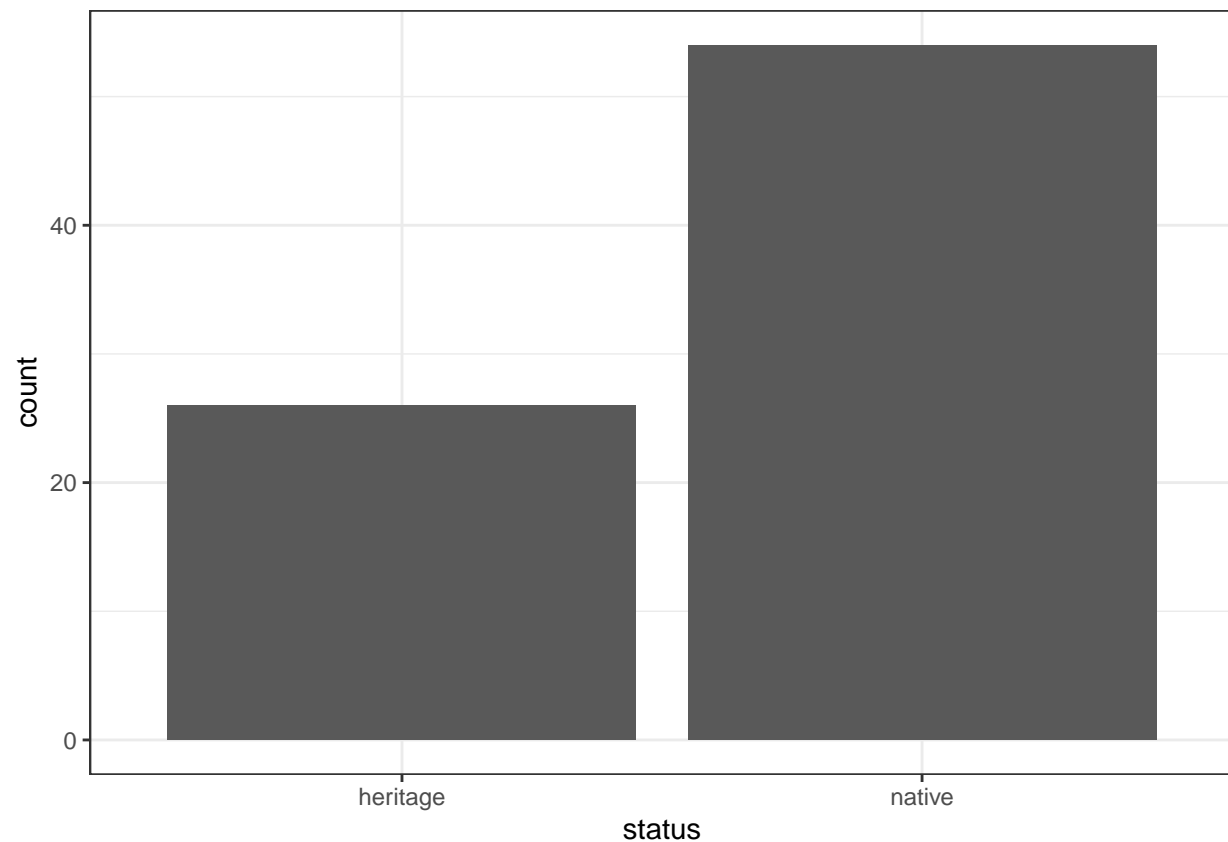
Participant Demographics

Language status

SIMK and foreign speakers were excluded from this analysis.

Foreign: first language and language spoken at school are not BCS
Heritage: first language is BCS and language spoken at school is not BCS
SIMK: Country of origin is Slovenia (SI) or Macedonia (MK)
native: first language and language spoken at school are BCS

Dialect Information

Dialect Measure 1

Dialects are often split up based on the phonological change of the Common Slavic *jat* vowel (*ě), which changed to /i/ (Ikavian/Ikavica), /e/ (Ekavian/Ekavica), or /ije/ /je/ (Ijekavian/Ijekavica). Standard

Croatian and Bosnian is based on Ijekavian, whereas standard Serbian is based on Ekavian. Serbians in Croatia, Bosnian Serbs, and Montenegrians mainly use Ijekavian. A geographic distribution is shown below.
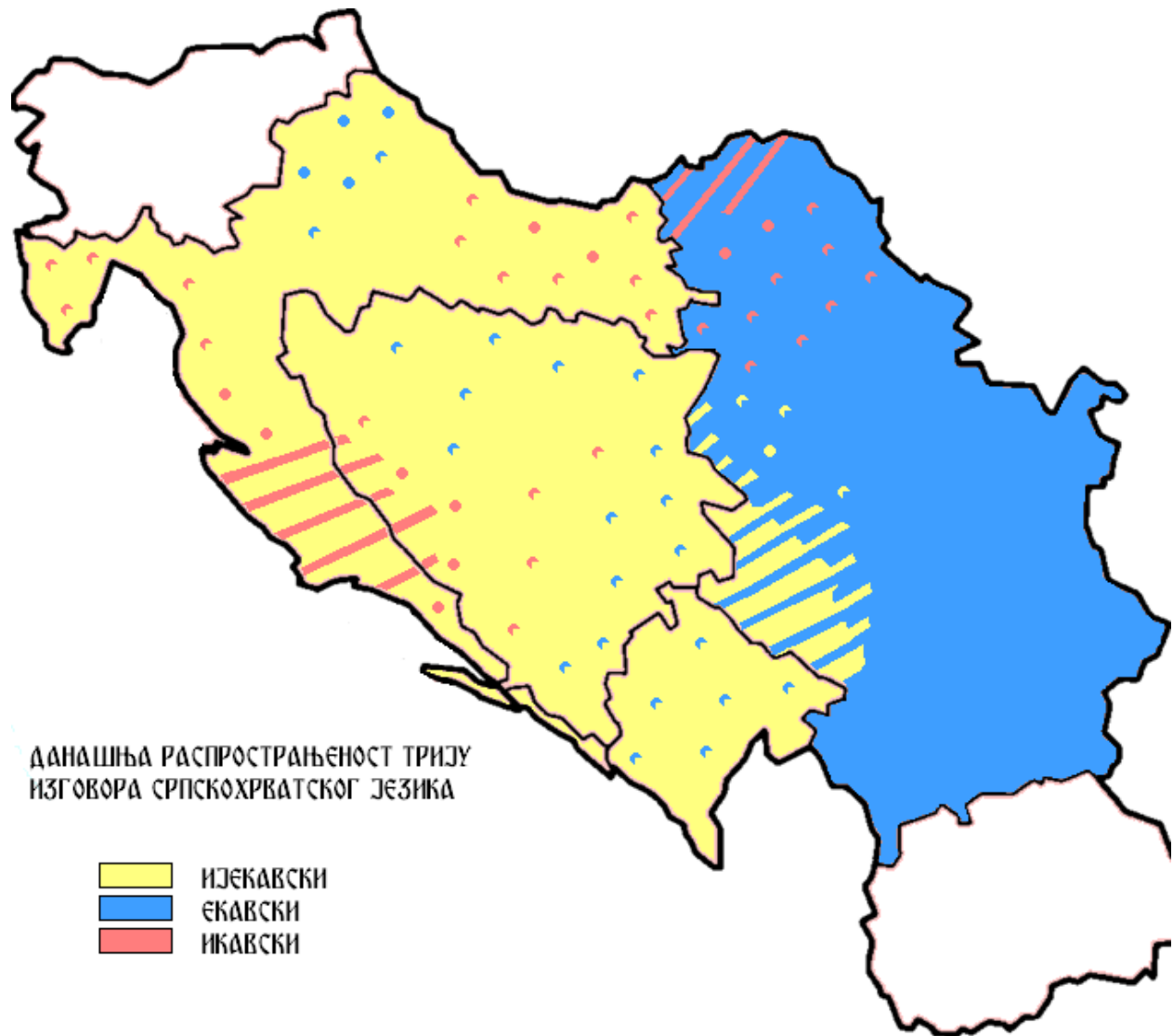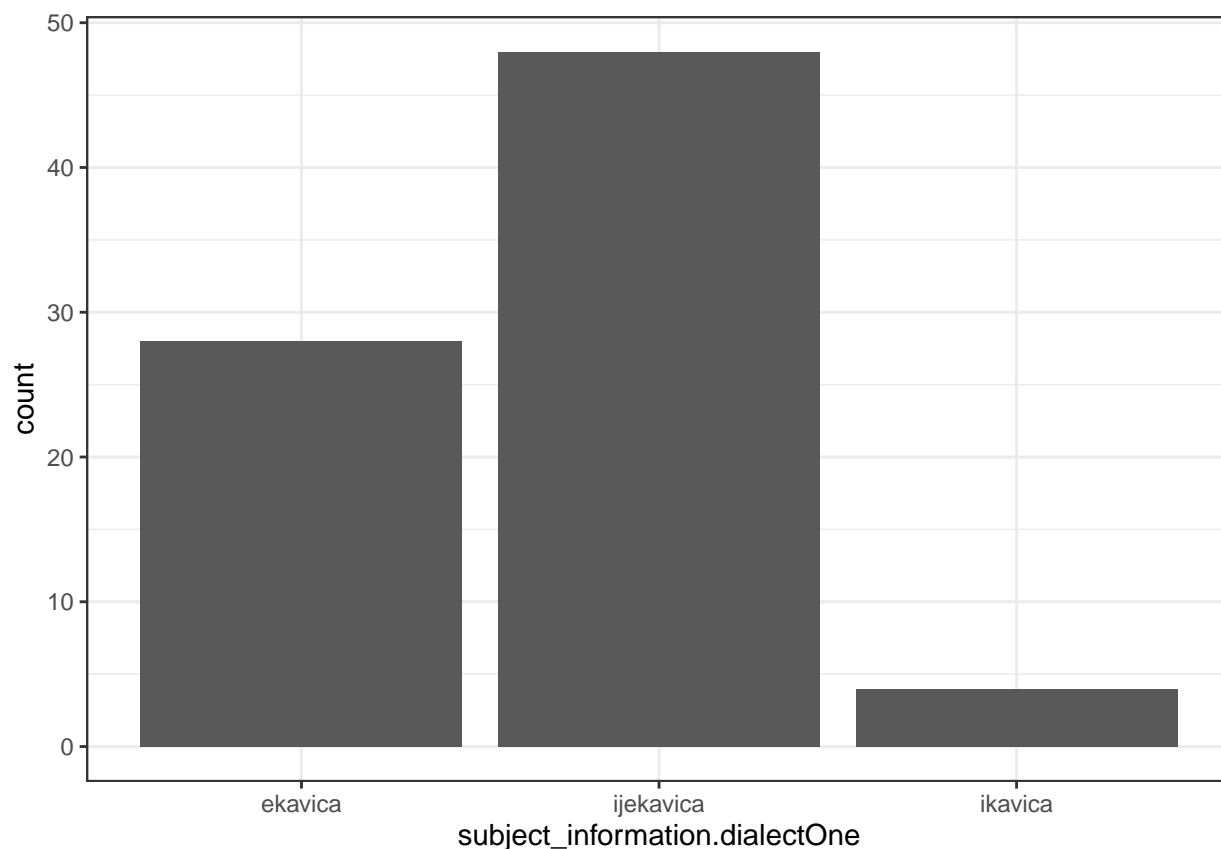

Figure 1: alt text here

yellow: ijekaciva
blue: ekavica
red: ikavica

Our participants had the following distribution:

Dialect Measure 2

Another common way of classifying the dialects is based on their most common wuestion word for "what":

Shtokavian (Štokavski) = što/šta
Chakavian (Čakavski) = Ča/ca
Kajkavian (Kajkavski) = Kaj/key

Shtokavian is the standard for all of BCS and is spoken in Bosnia and Herzegovina, Croatia, Montenegro, and Serbia. Chakavian is spoken on the Croatian coast and Kajkavian is spoken in northern Croatia. Slovenians use the word "kaj" for the "what" question word, therefore I assume Slovenians would be classified as Kaikavian speakers based on my dialect survey (even if they don't produce the word "kaj" when speaking BCS).

The map below gives a geographic distribution of the three dialects in Croatia. Bosnia and Herzegovina, Mongenegro, and Serbia would all be colored green based on this map.

Chakavian (blue) = Čakavski
Kaikavian (purple) = Kajkavski
Shtokavian (green) = Štokavski

Our participants had the following dialect distribution:

Figure 2: alt text here
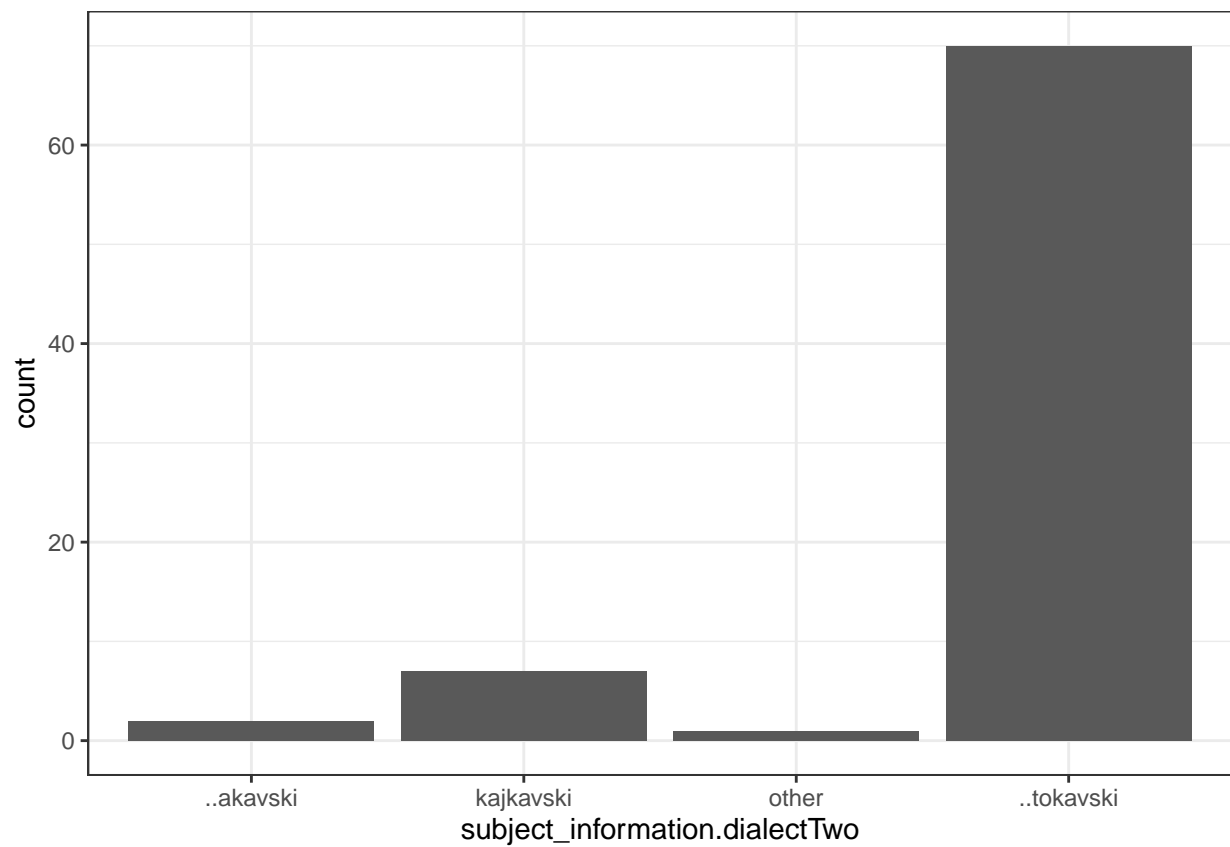
Country of participants

Participants answered the question: In which Ex-Jugoslav country did I live in/spent a lot of time in. This question aims to get a geographic distribution of participants. While we can classify speakers across ekavian/ikavian/ijekavian dialects, since this distiction represents a phonological one, it is unclear whether it will likewise reflect a difference in use of lexical items. Keep in mind that the answer to this question is distinct from what nationality participants identify as (for example there are Serbians, Croatians, and Bosnians who all live in Bosnia and Hercegovina). Based on my (limited) observations, I believe that country may be a better predictor of lexical items than national identity could be.

BIH: Bosnia and Herzegovina
HR: Croatia
SRB: Serbia
SI: Slovenia
MK: Macedonia
MNE: Montenegro
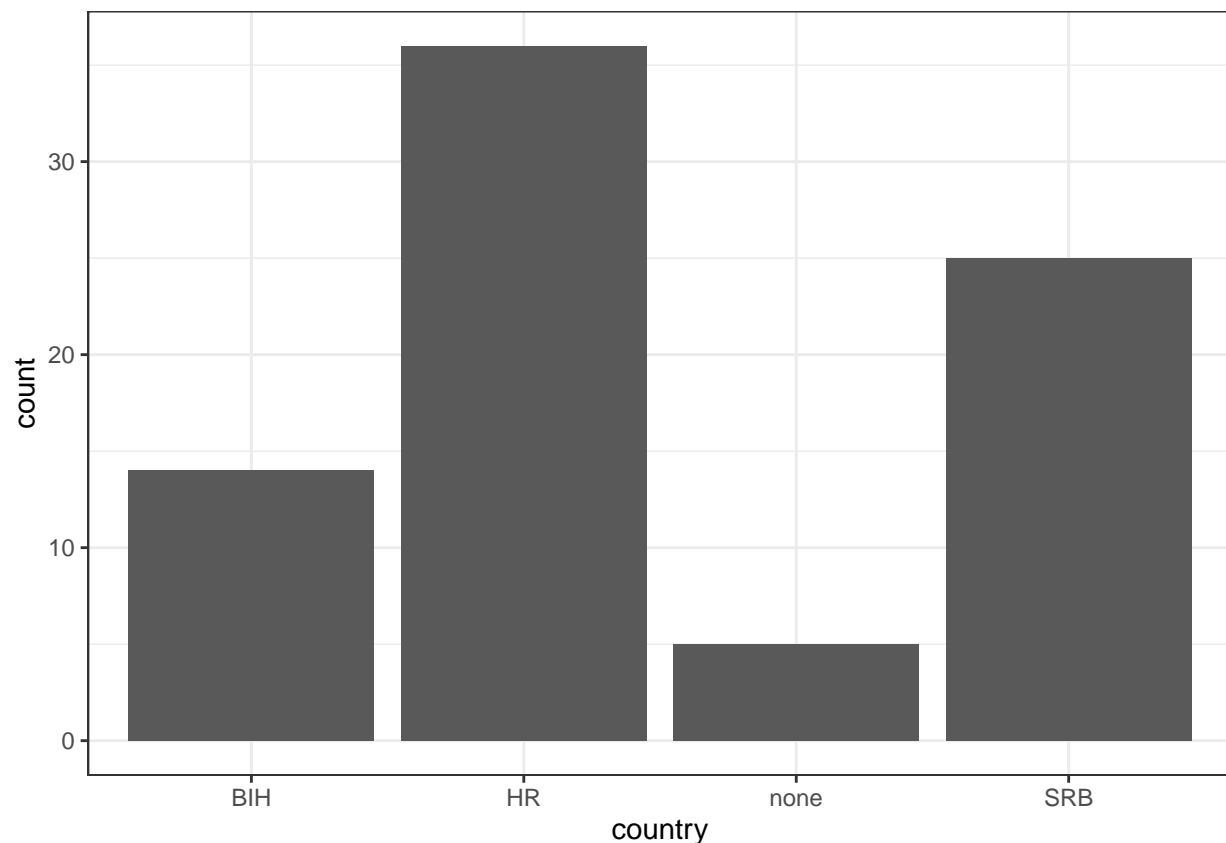
Colors

A quick reference guide to colors in BCS. The longer responses are often compounds of multiple colors.

Analysis of which words should be used

Here are all the repsonses that were under threshold:

Figure 3: alt text here

```
##                item       label   percent  color    object
## 1      orange_piano      smedje 0.4230769 orange     piano
## 2   white_fryingpan        belo 0.4375000  white fryingpan
## 3        white_bike        belo 0.4444444  white      bike
## 4      orange_bench narandzasto 0.4761905 orange     bench
## 5      orange_razor narandzasto 0.5454545 orange     razor
## 6       orange_boot narandzasto 0.5625000 orange      boot
## 7      black_shield        crno 0.6111111  black    shield
## 8  orange_umbrella narandzasto 0.6111111 orange  umbrella
## 9  yellow_fryingpan        zuto 0.6111111 yellow fryingpan
## 10 orange_airplane narandzasto 0.6315789 orange  airplane
## 11     orange_spoon narandzasto 0.6500000 orange     spoon
## 12      orange_tent narandzasto 0.6785714 orange      tent
## 13     orange_ladle narandzasto 0.6818182 orange     ladle
## 14       orange_box narandzasto 0.6842105 orange       box
## 15        white_key        belo 0.6842105  white       key
## 16      orange_cake narandzasto 0.6923077 orange      cake
```

There were **16** responses that were under the 70% threshold.

Of those, these are the instances where the majority is not the color we expected:

```
##            item  label   percent  color object
## 1 orange_piano smedje 0.4230769 orange  piano
```

That is:
orange_piano –> "smedje" (brown)

The color distribution of the items that did not meet threshold are as follows:

```
## # A tibble: 4 x 2
## # Groups:   color [4]
##   color       n
##   <chr>   <int>
## 1 black       1
## 2 orange     11
## 3 white       3
## 4 yellow      1
```

Let's take a look at them color by color:

Black

```
##            item label   percent color object
## 1 black_shield  crno 0.6111111 black shield
```

Out of a total of **18** black shield objects, 4 contained the a compound color of black and brown. This is most likely because the shield had a brown border. We can either leave it as is, or I can get rid of the brown border and make the shield entirely black. It is possible that these 4 responses are overzealous participants who want to be as informative as possible.

Orange

```
##                item       label   percent  color   object
## 1 orange_airplane narandzasto 0.6315789 orange airplane
## 2    orange_bench narandzasto 0.4761905 orange    bench
```

```
## 3       orange_boot narandzasto 0.5625000 orange     boot
## 4        orange_box narandzasto 0.6842105 orange      box
## 5       orange_cake narandzasto 0.6923077 orange     cake
## 6      orange_ladle narandzasto 0.6818182 orange    ladle
## 7      orange_piano      smedje 0.4230769 orange    piano
## 8      orange_razor narandzasto 0.5454545 orange    razor
## 9      orange_spoon narandzasto 0.6500000 orange    spoon
## 10      orange_tent narandzasto 0.6785714 orange     tent
## 11 orange_umbrella narandzasto 0.6111111 orange umbrella
```

There are a total of 11 orange items that do not meet the 70% threshold out of a total of 52 items, meaning that 21.1538461538462% of orange items do not meet the threshold.

Qualitatively looking through the responses, a lot of them include compounds and/or the words "braun" "smedje" (both meaning brown).

This really comes down to how we want to treat compounds. If we choose to count compounds like "orange-brown" as orange, then some of these may reach threshold.

orange__piano has a majority of responses of "brown"

White

```
##               item label   percent color     object
## 1       white_bike  belo 0.4444444 white       bike
## 2 white_fryingpan  belo 0.4375000 white fryingpan
## 3        white_key  belo 0.6842105 white        key
```

These did not reach threshold due to answers for "silver" and "grey"

Yellow

```
##               item label   percent  color     object
## 1 yellow_fryingpan  zuto 0.6111111 yellow fryingpan
```

All responses that were not "yellow" were "golden" (7).

Participant Responses

Responses that participants gave to the question "What is the color of this object?" are given below. Each graph is faceted based on the color the object was presented in.

Percent of people who answered with the most common answer:

```
## [[1]]
```

airplane
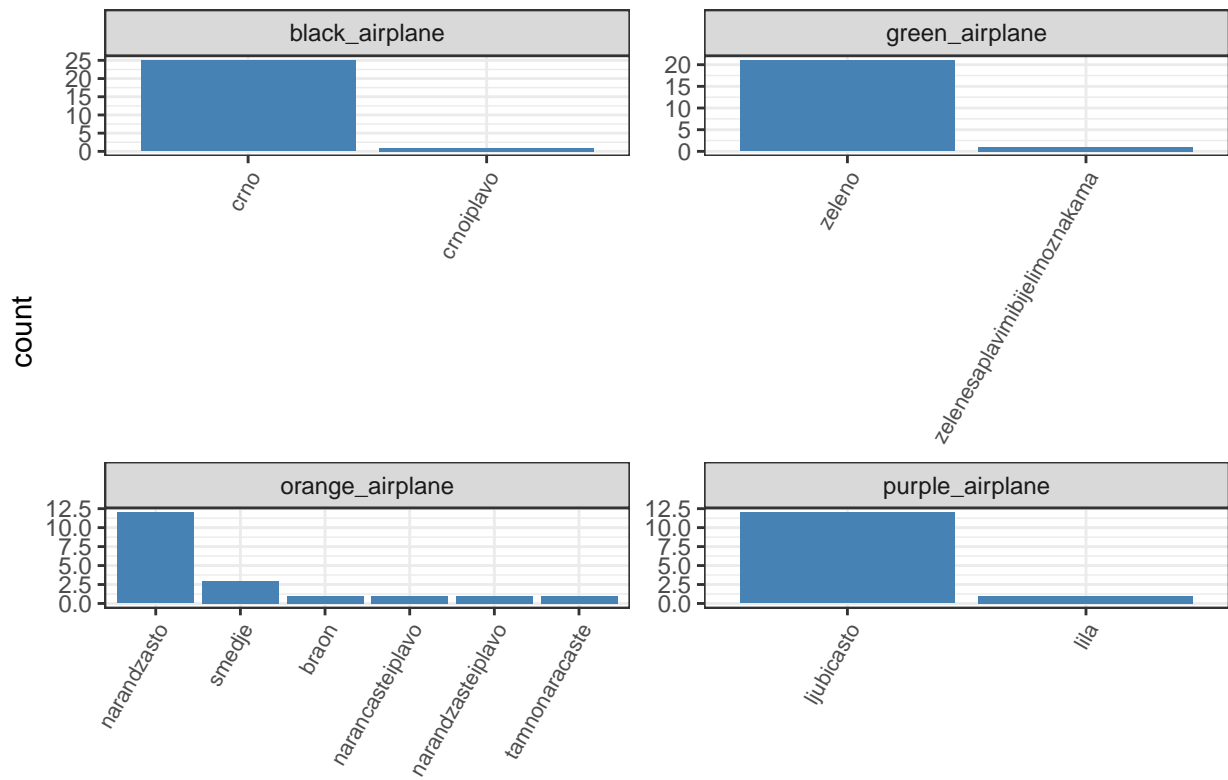

```
## 
## [[2]]
```

armchair
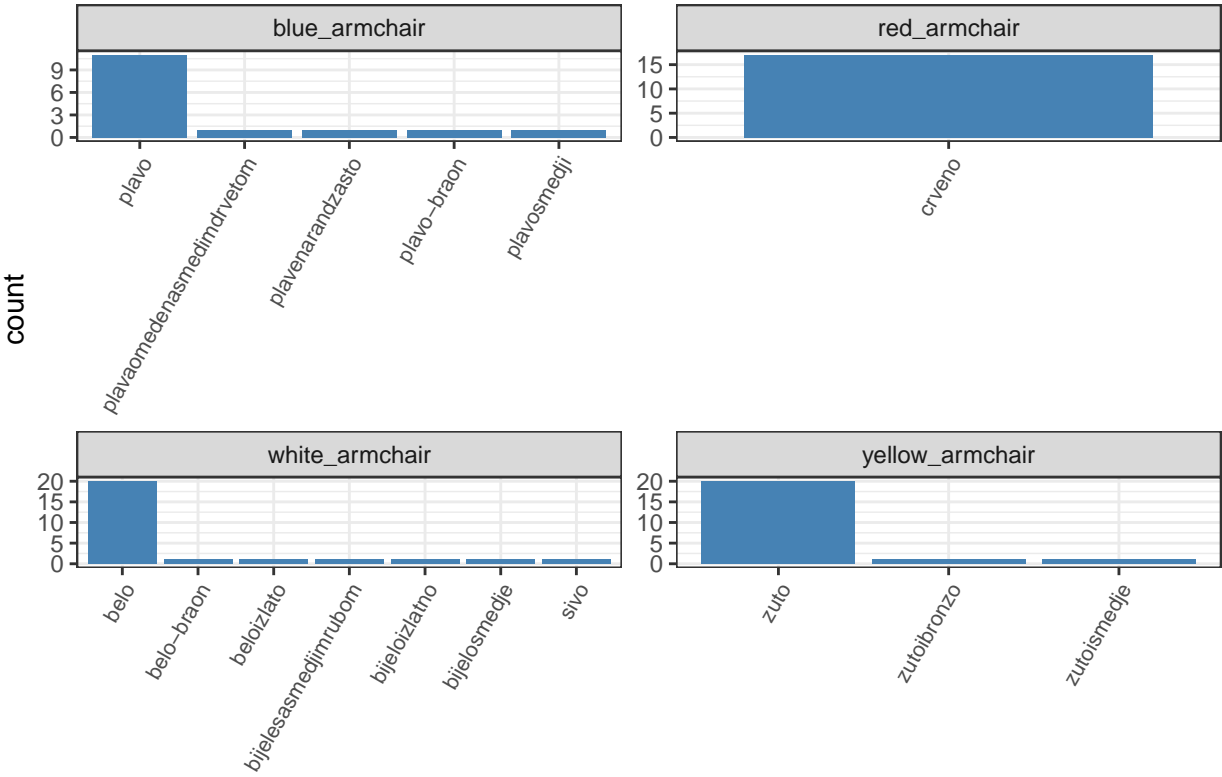

```
## 
## [[3]]
```

balloon
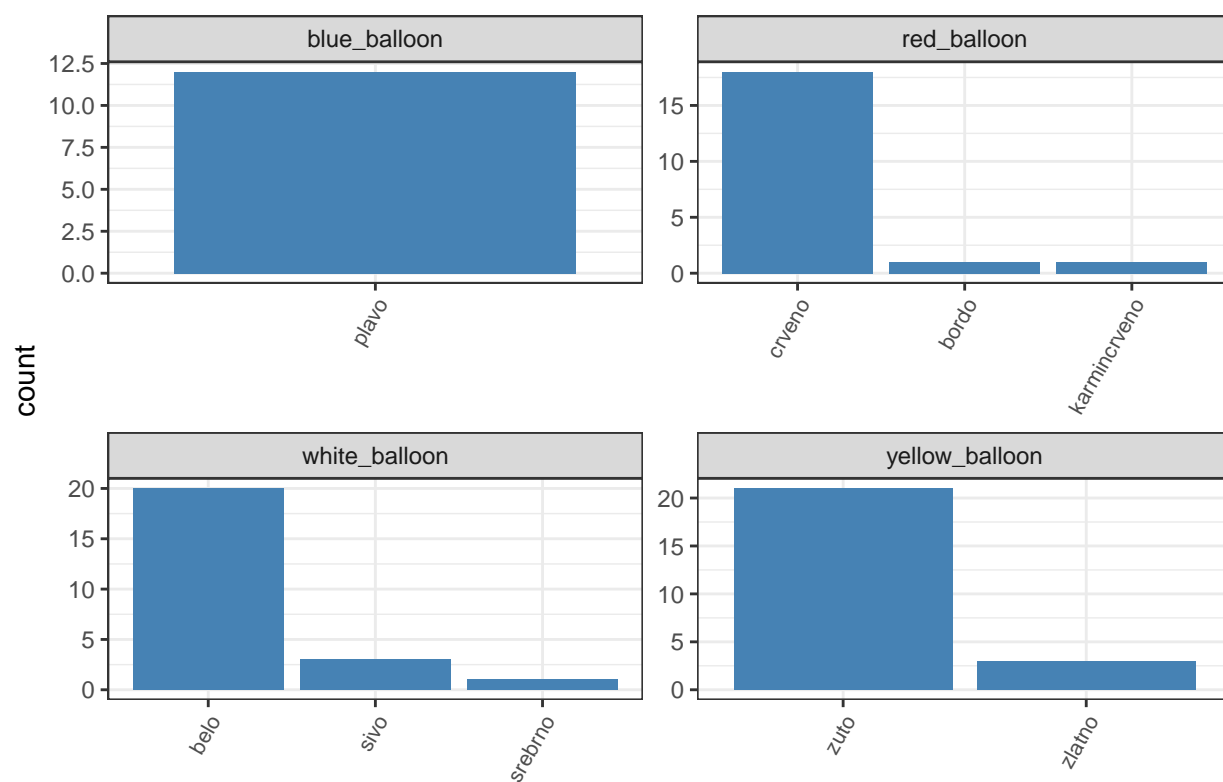

```
## 
## [[4]]
```

bandaid
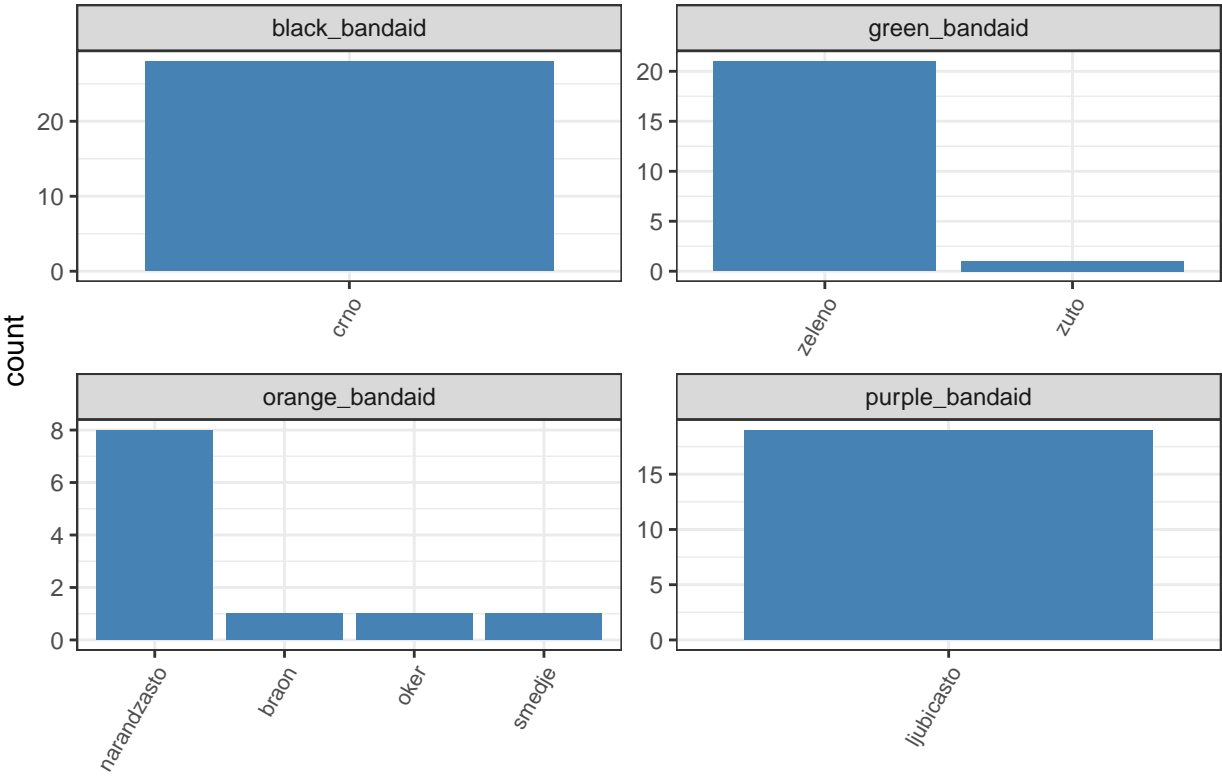

```
##
## [[5]]
```

basket
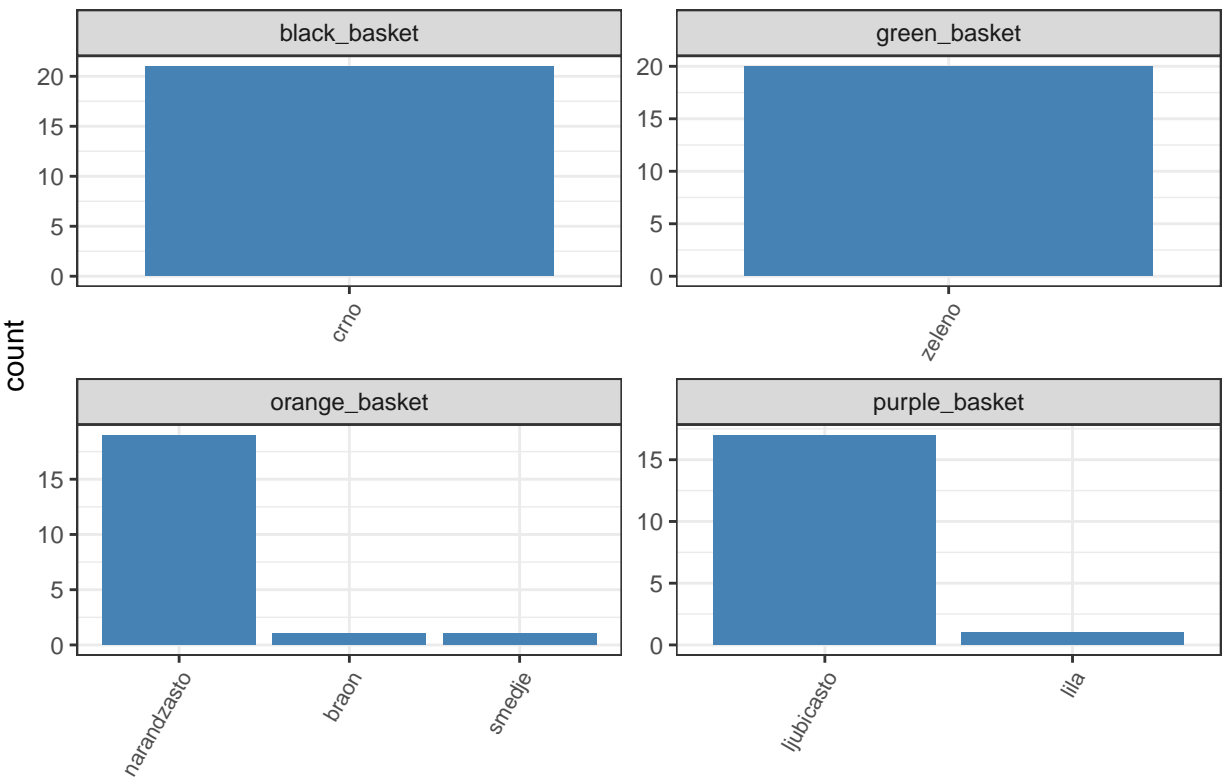

```
## 
## [[6]]
```

bed
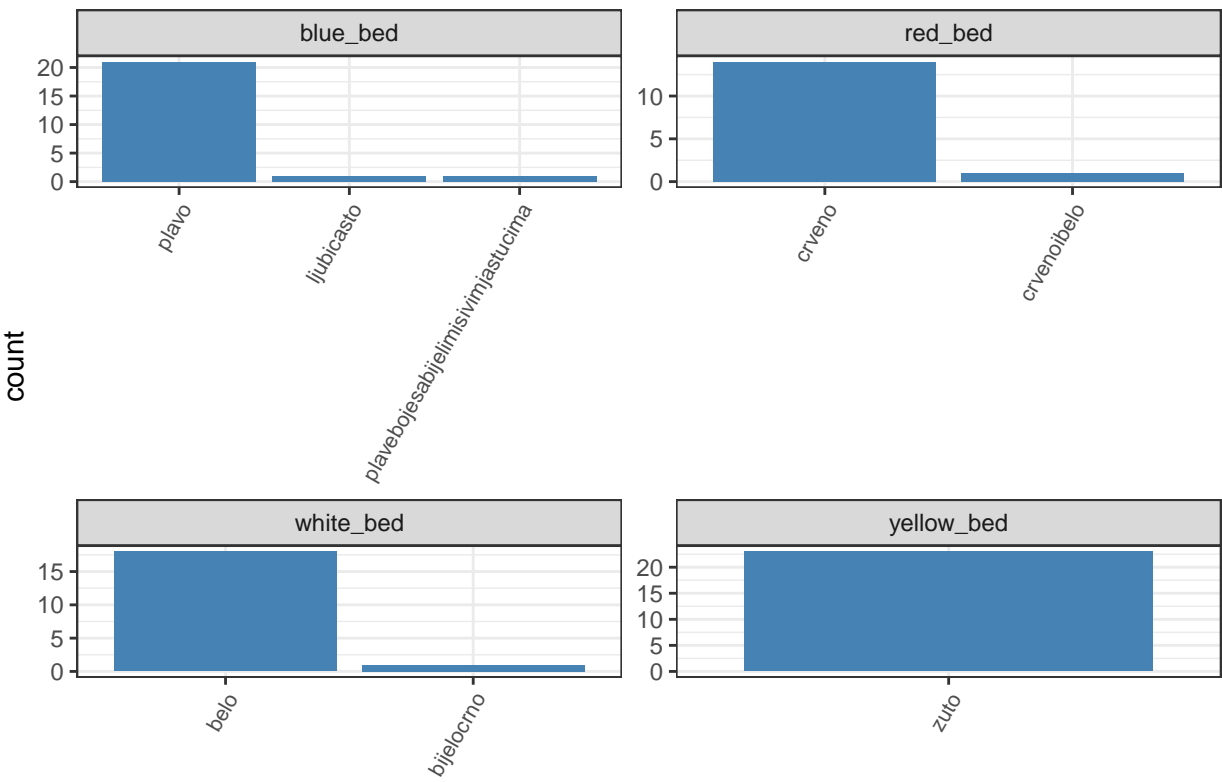

```
##
## [[7]]
```

belt
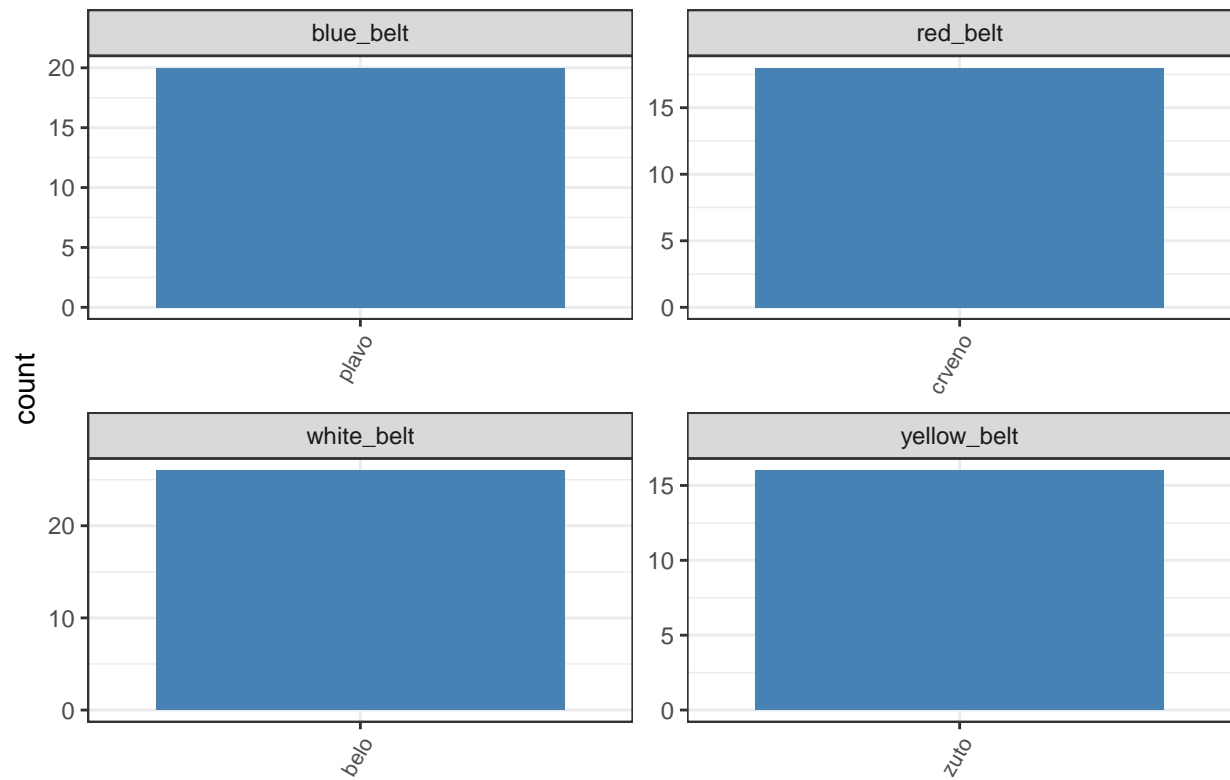

```
## 
## [[8]]
```

bench
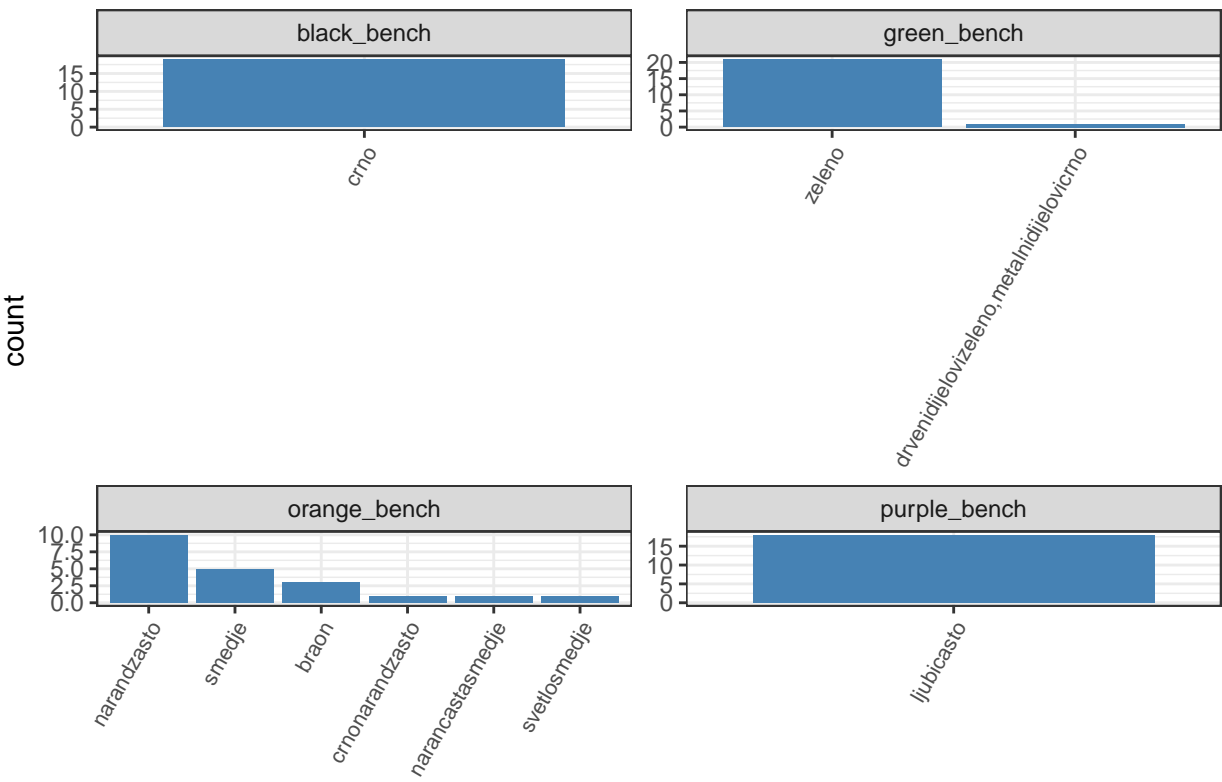

```
## 
## [[9]]
```

bike
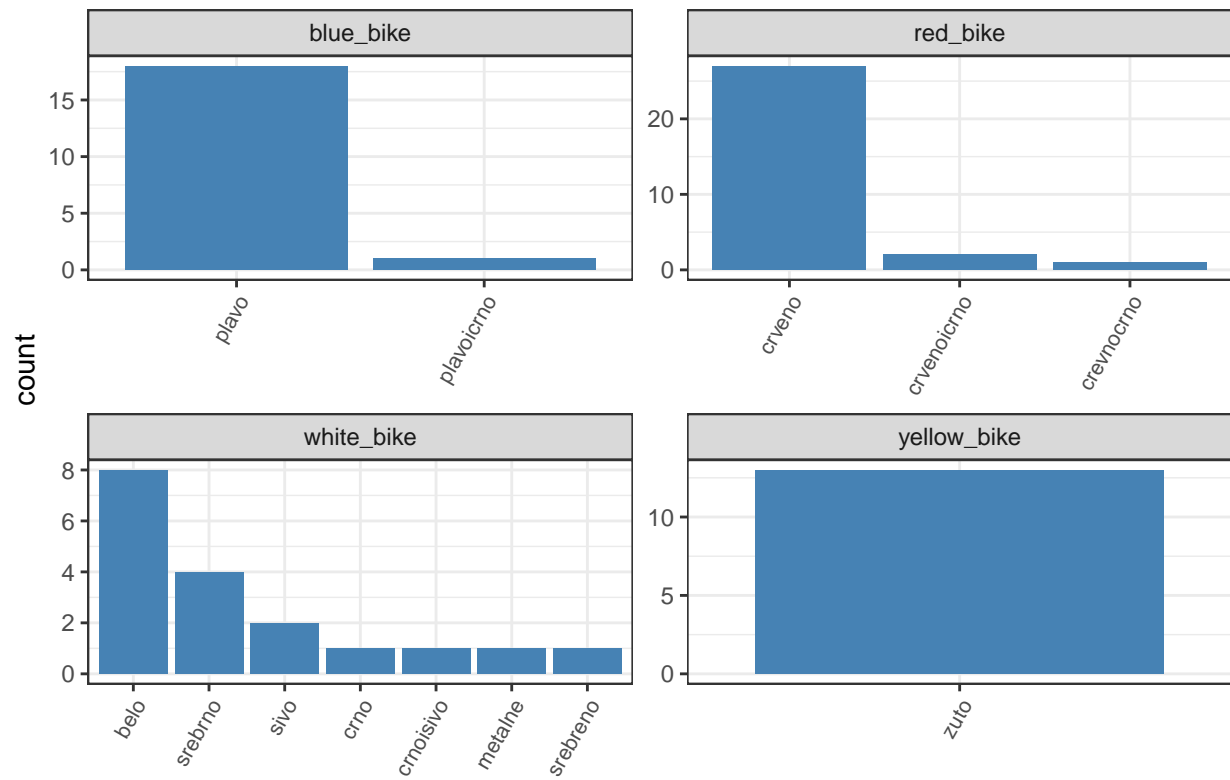

```
## 
## [[10]]
```

billiardball
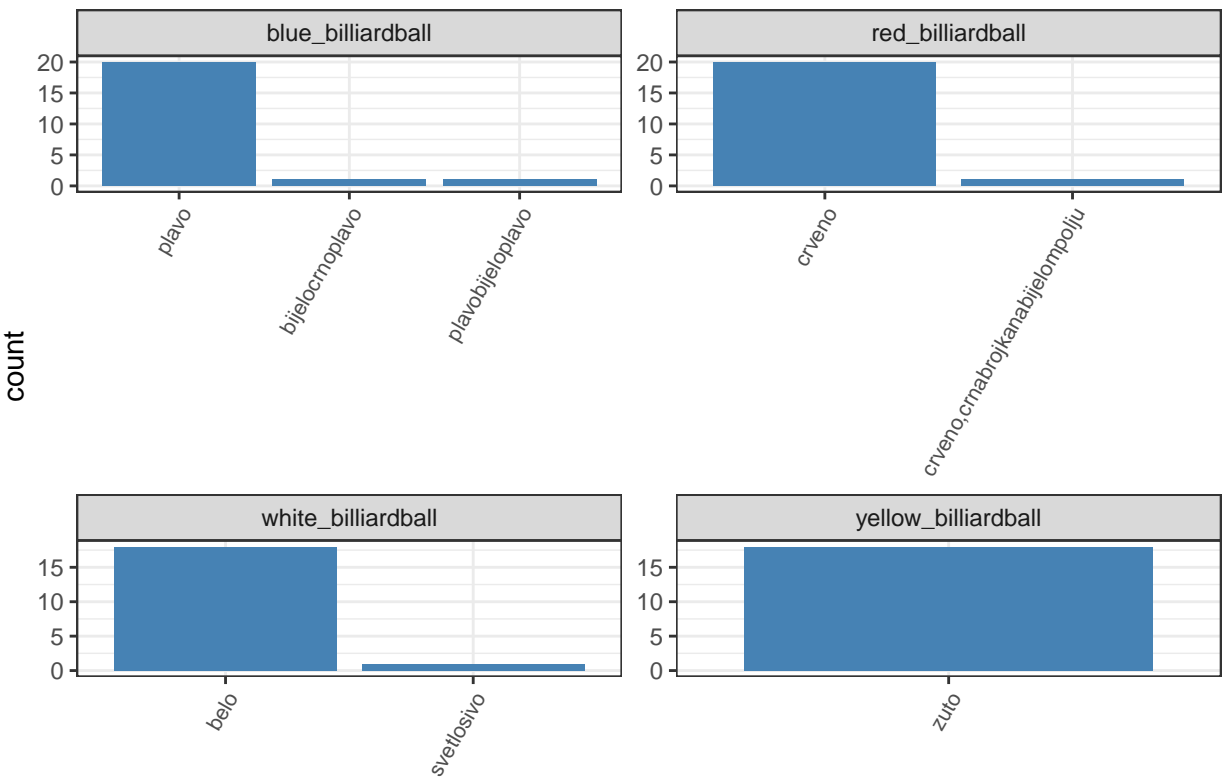

```
##
## [[11]]
```

binder
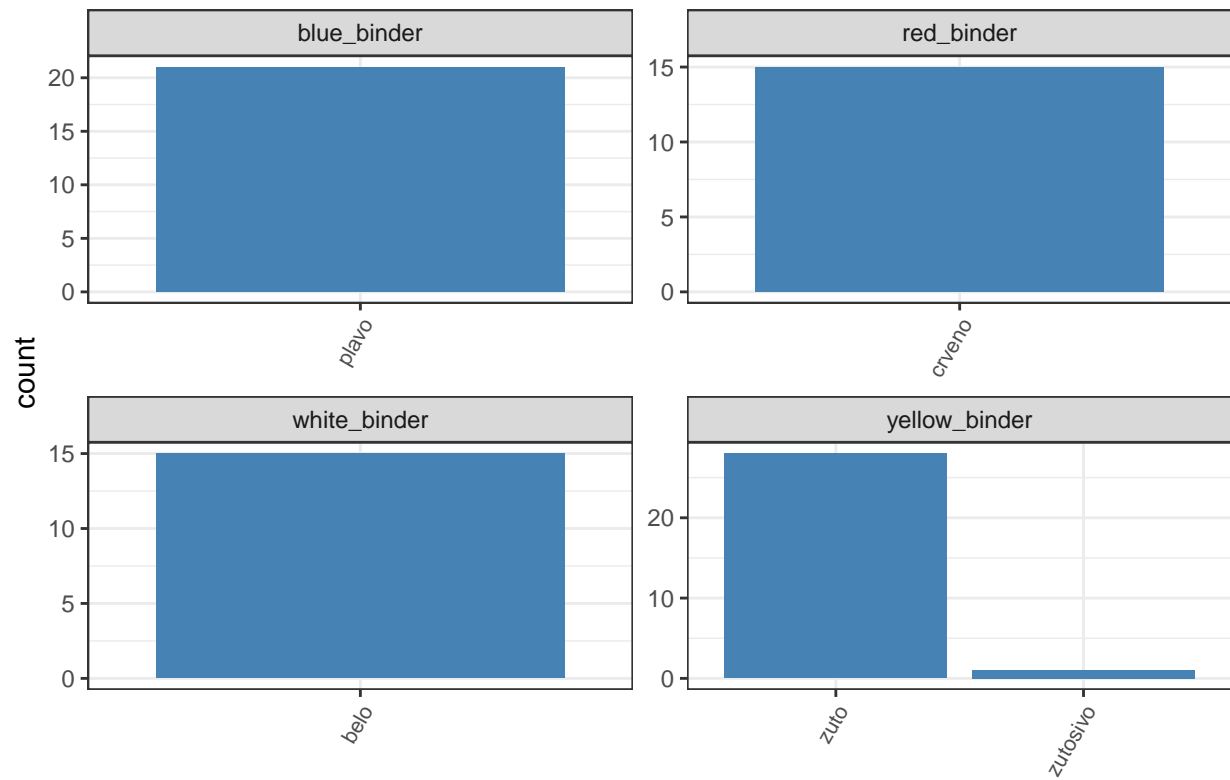

```
## 
## [[12]]
```

binoculars
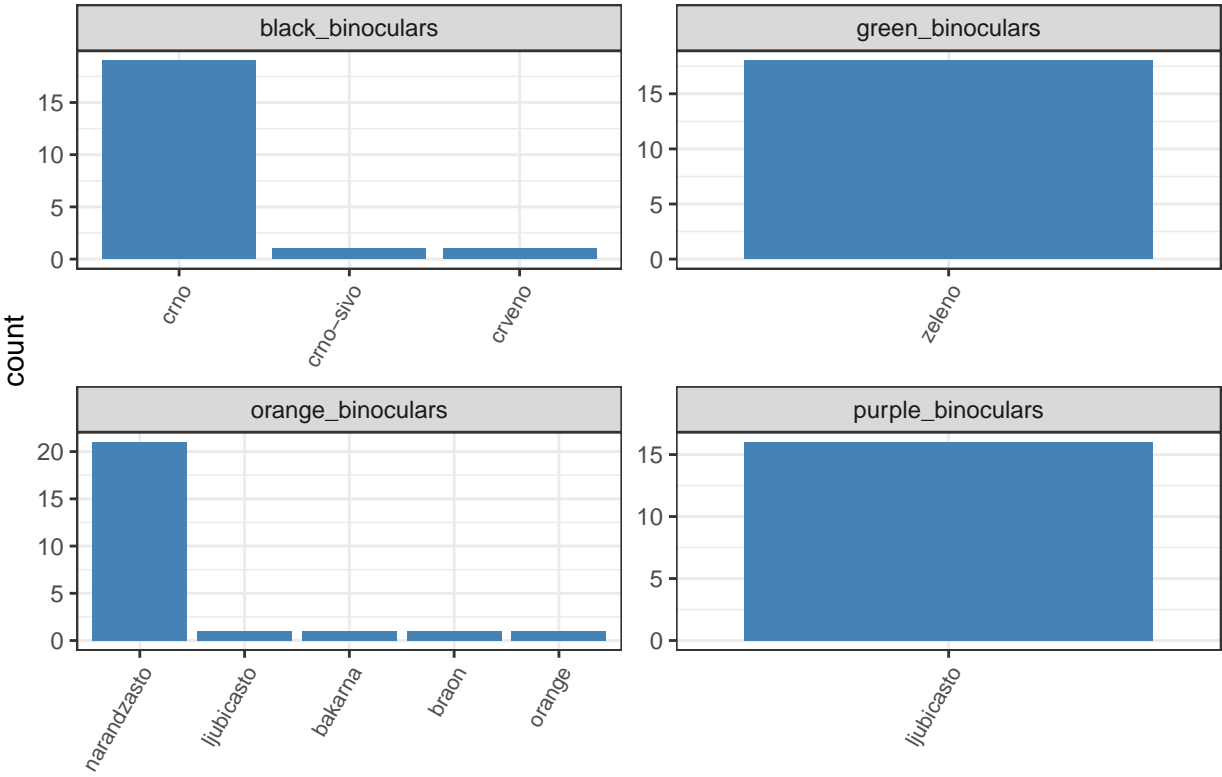

```
## 
## [[13]]
```

bonbon
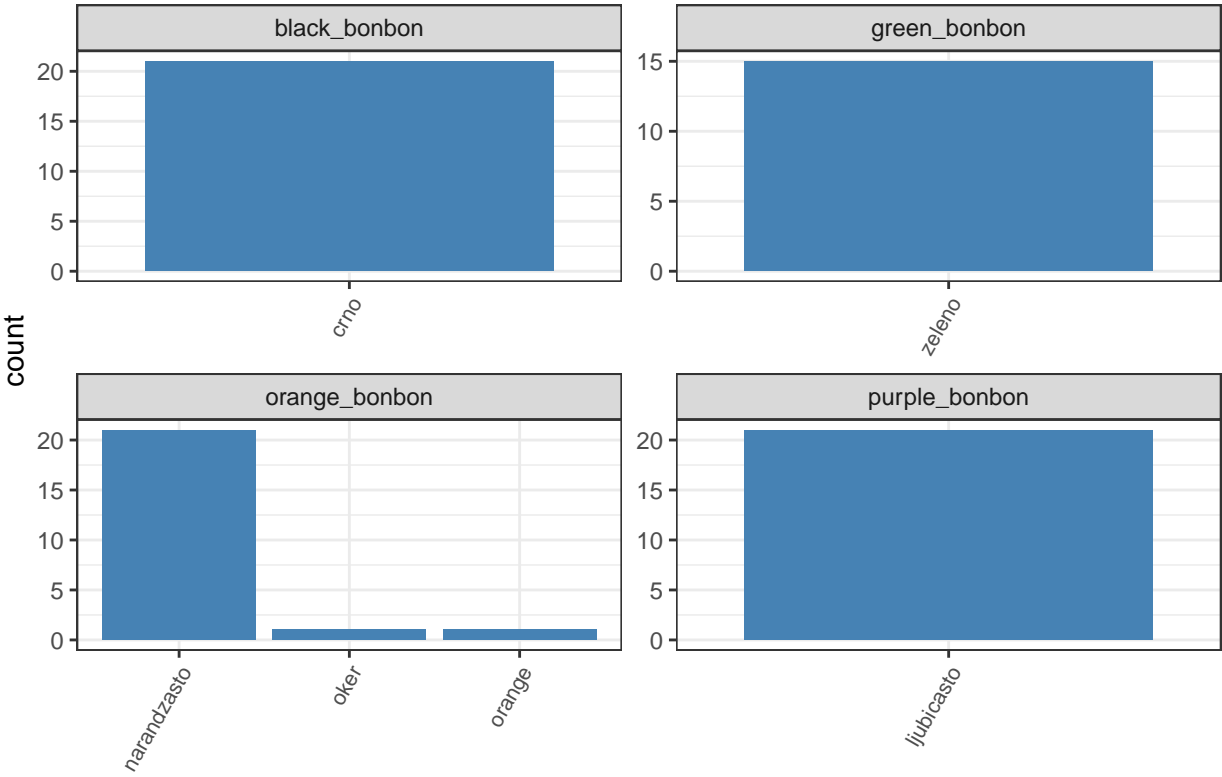

```
##
## [[14]]
```

book
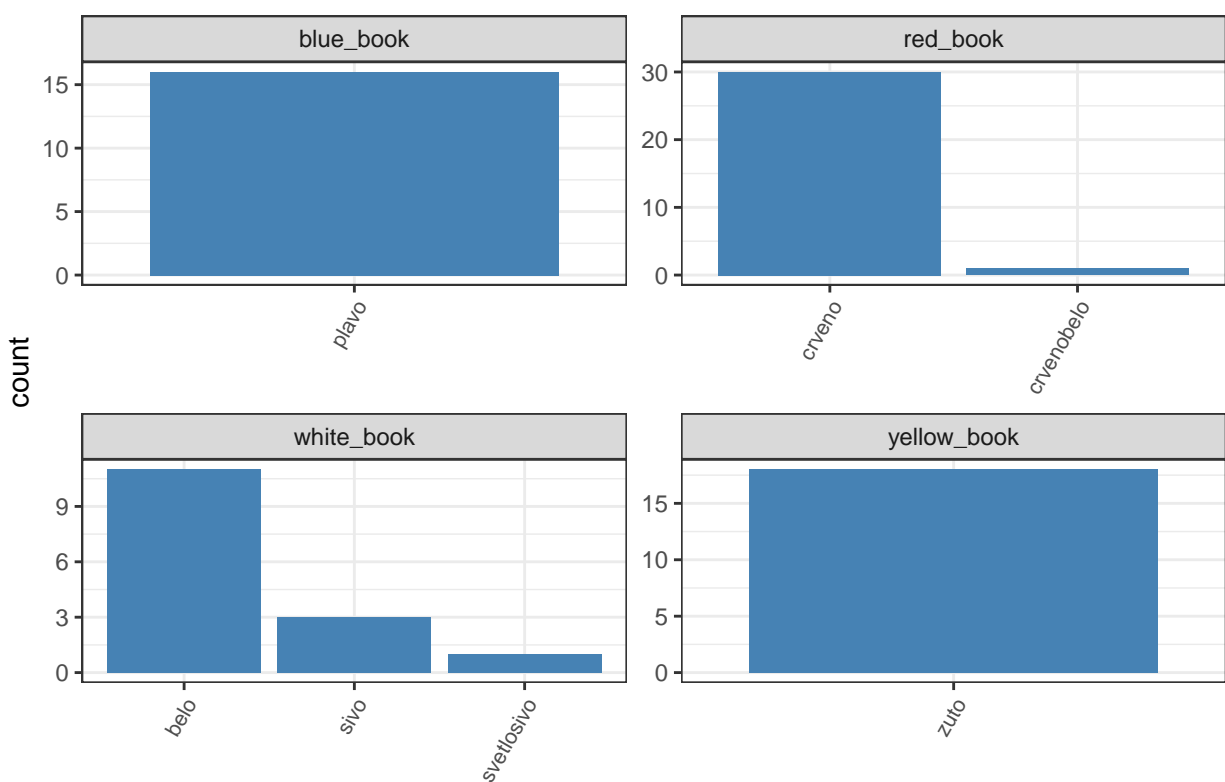

```
## 
## [[15]]
```

boot
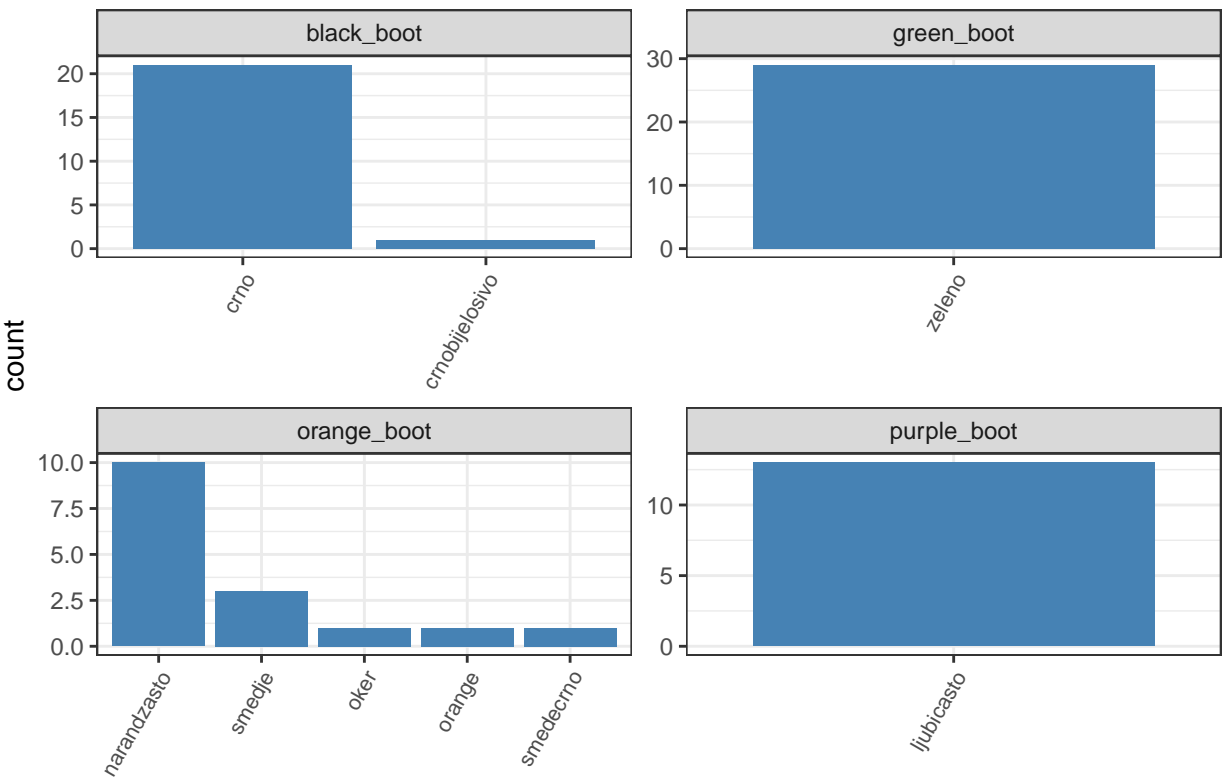

```
## 
## [[16]]
```

bowl
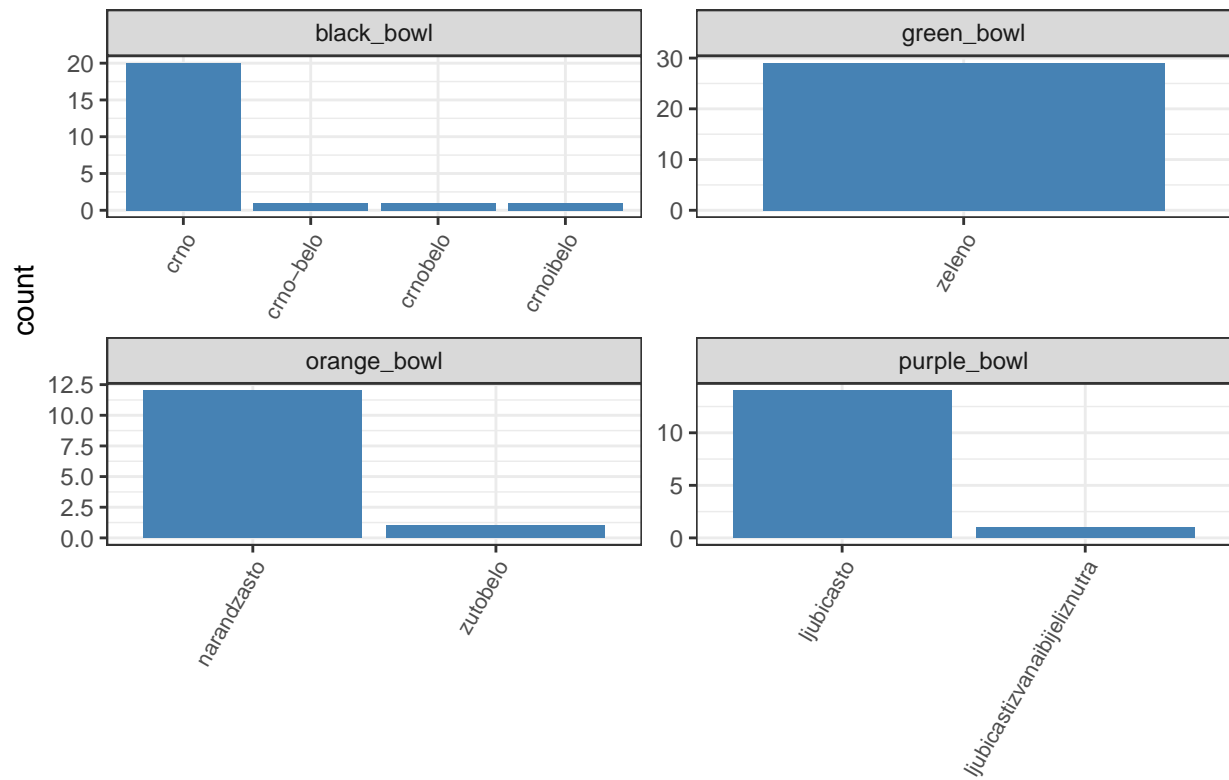

```
## 
## [[17]]
```

box
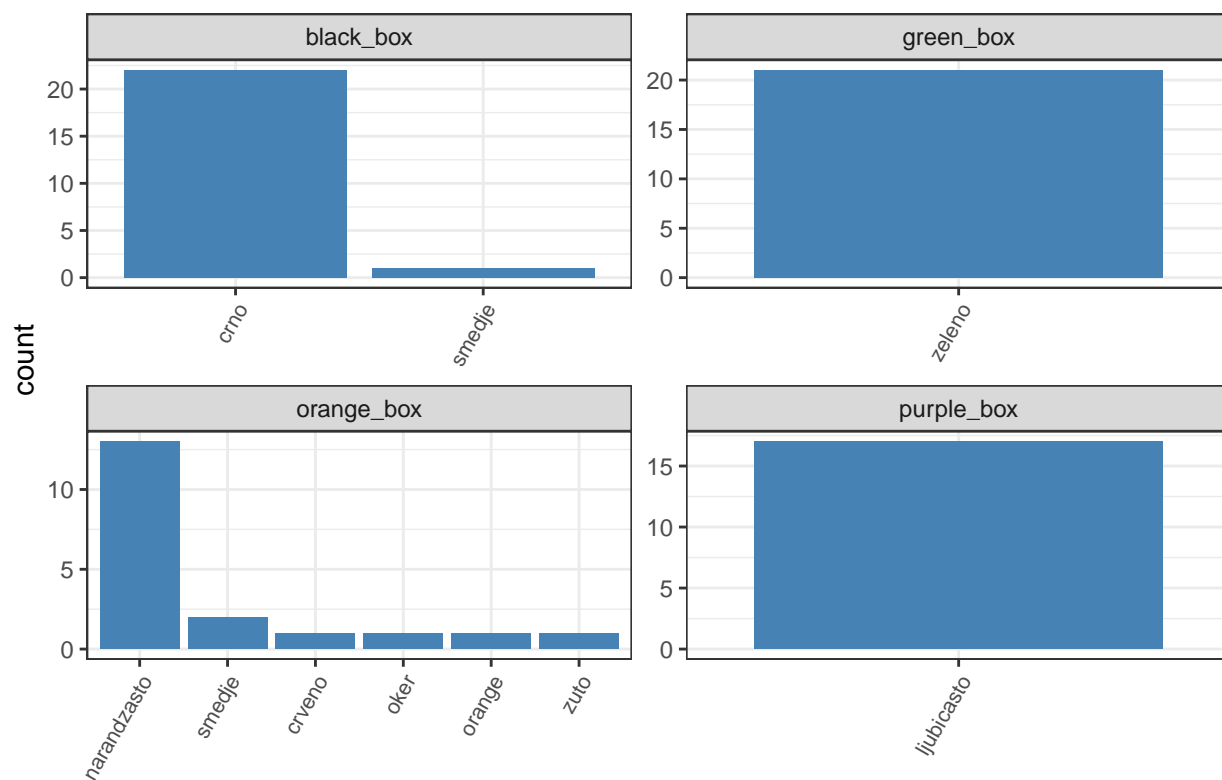

```
## 
## [[18]]
```

bracelet
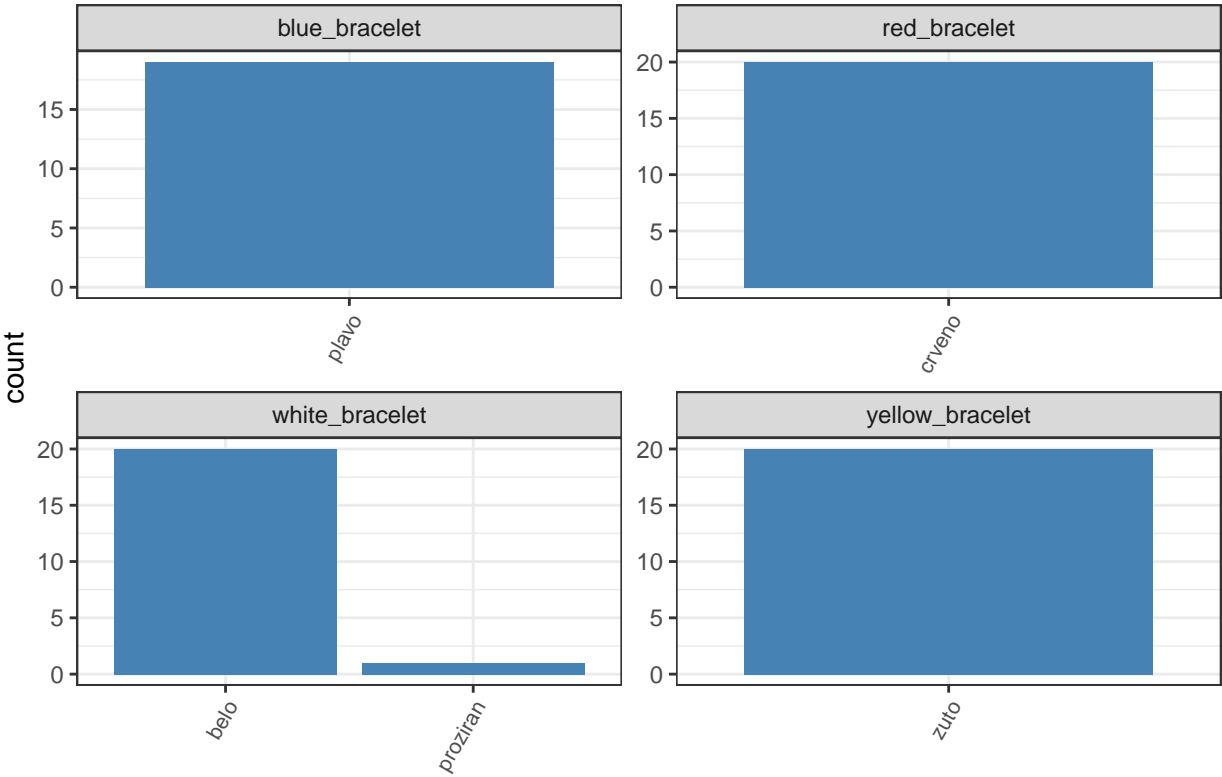

```
##
## [[19]]
```

bucket


```
## 
## [[20]]
```

butterfly


```
##
## [[21]]
```

cake


```
## 
## [[22]]
```
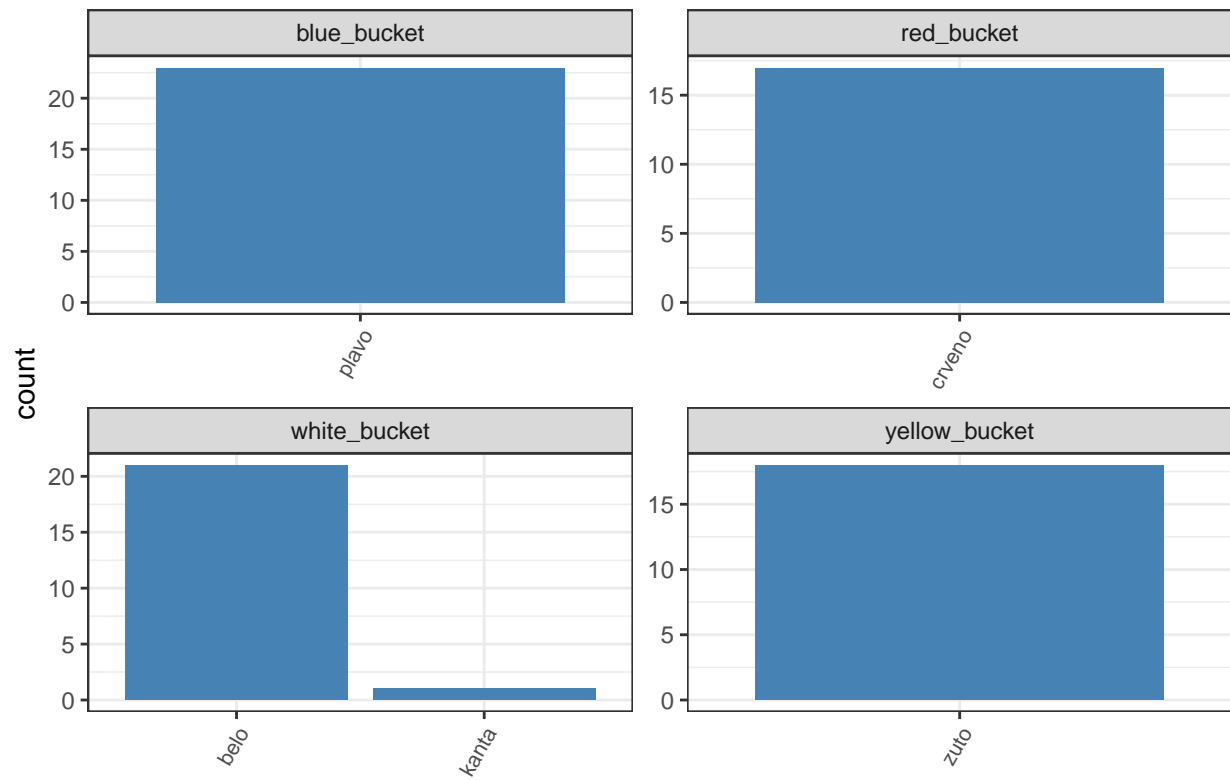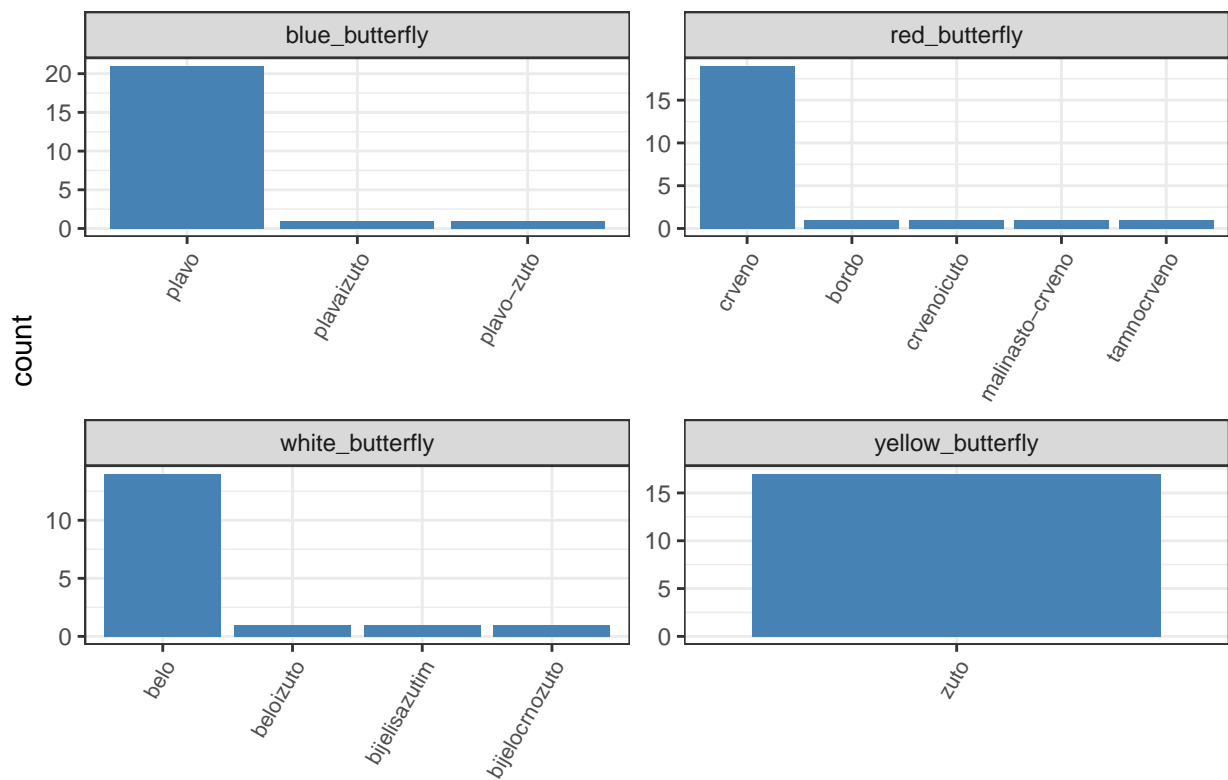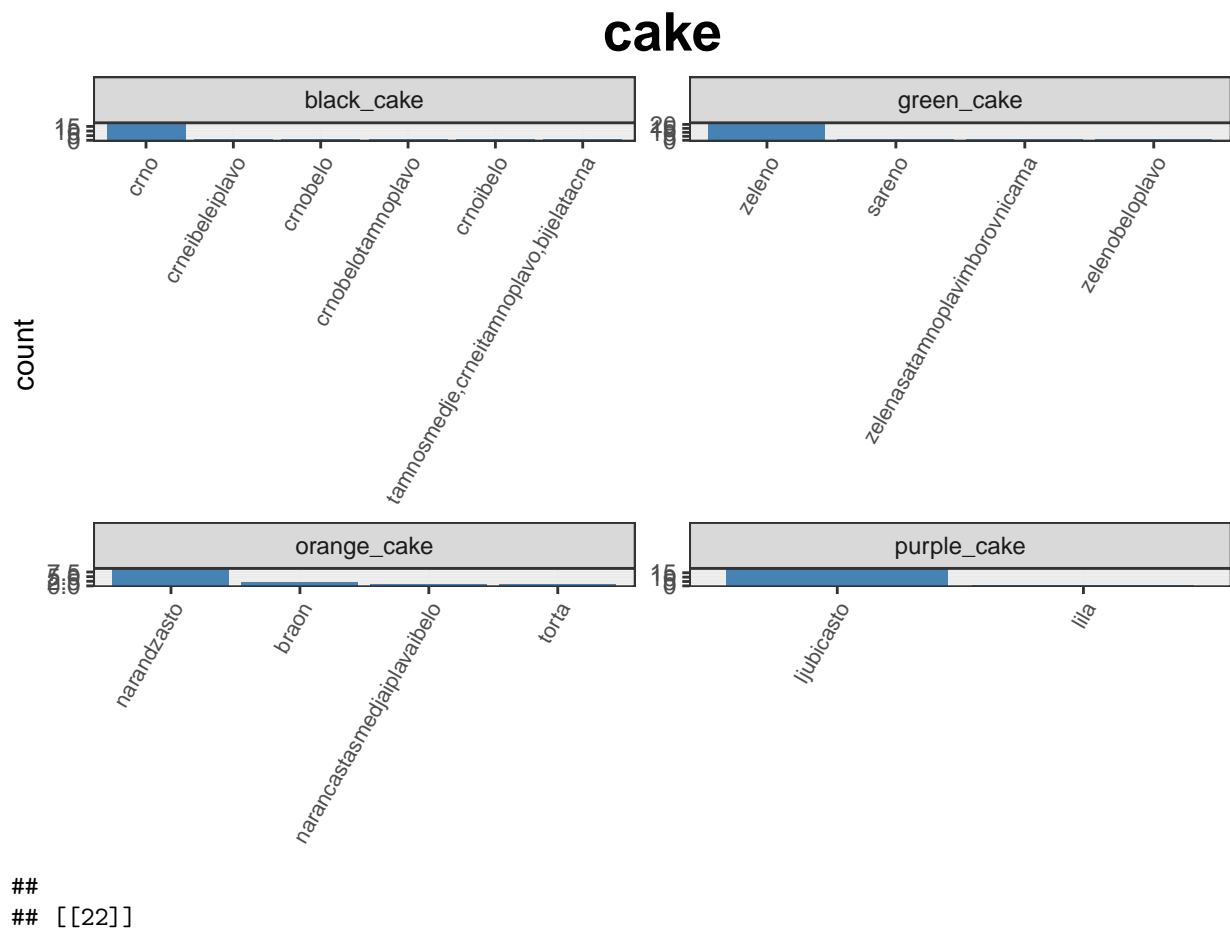
calculator
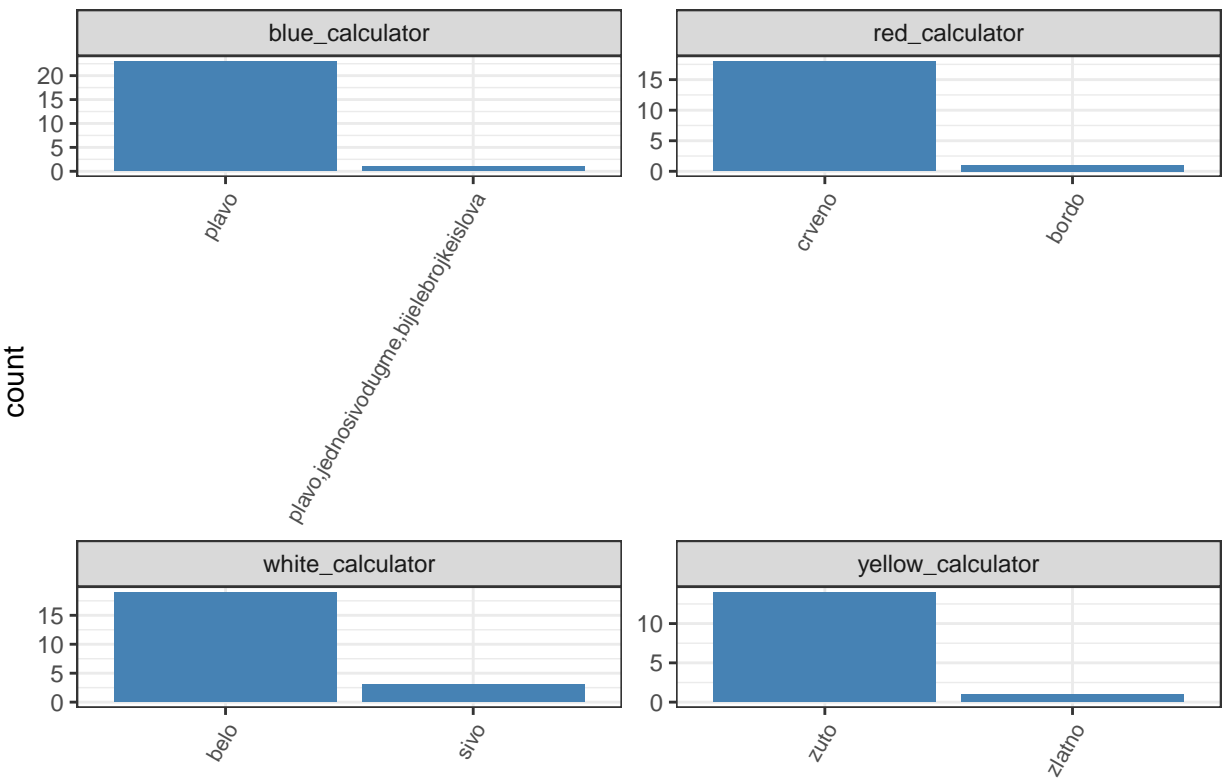

```
## 
## [[23]]
```

calendar
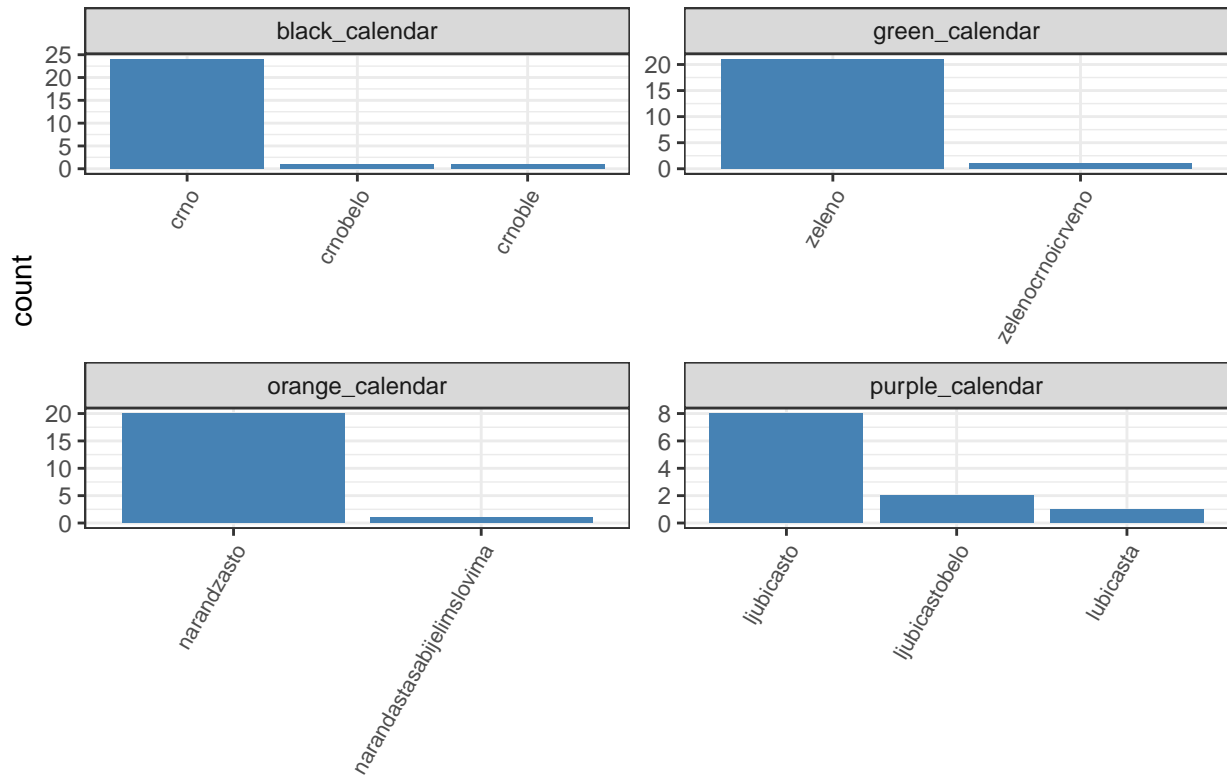

```
## 
## [[24]]
```

camera
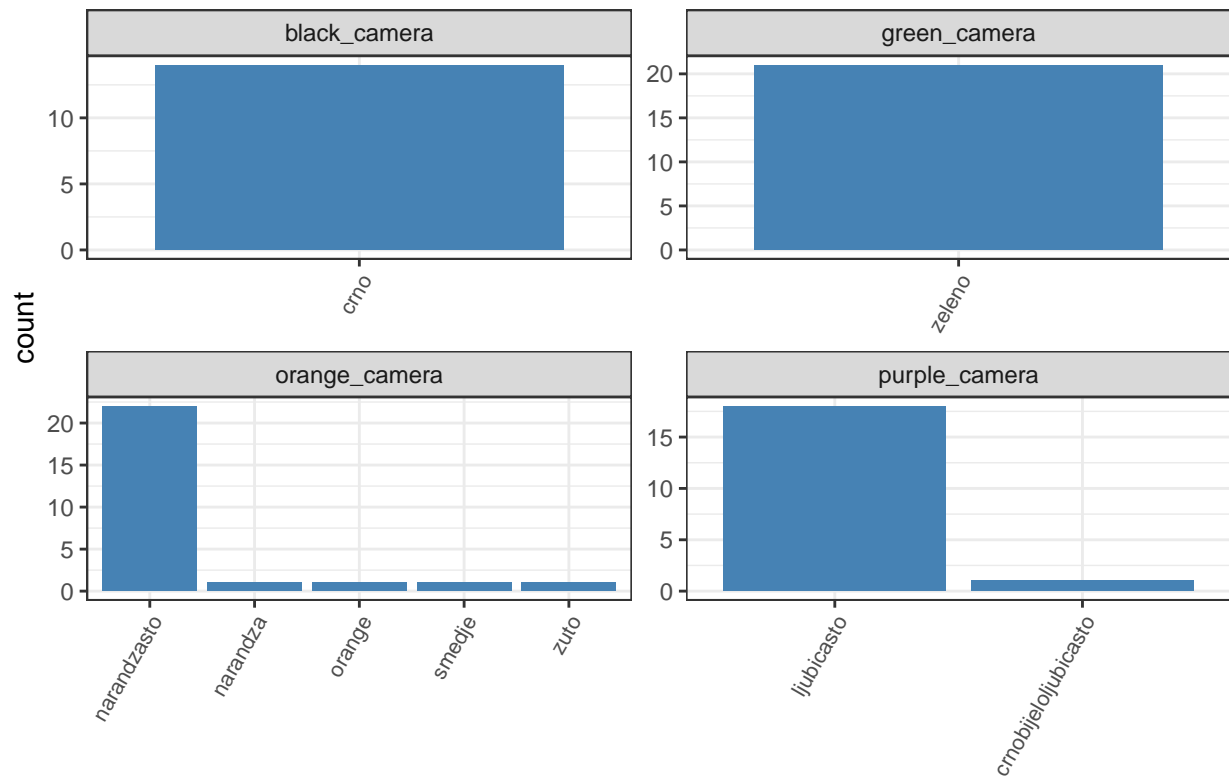

```
## 
## [[25]]
```

candle
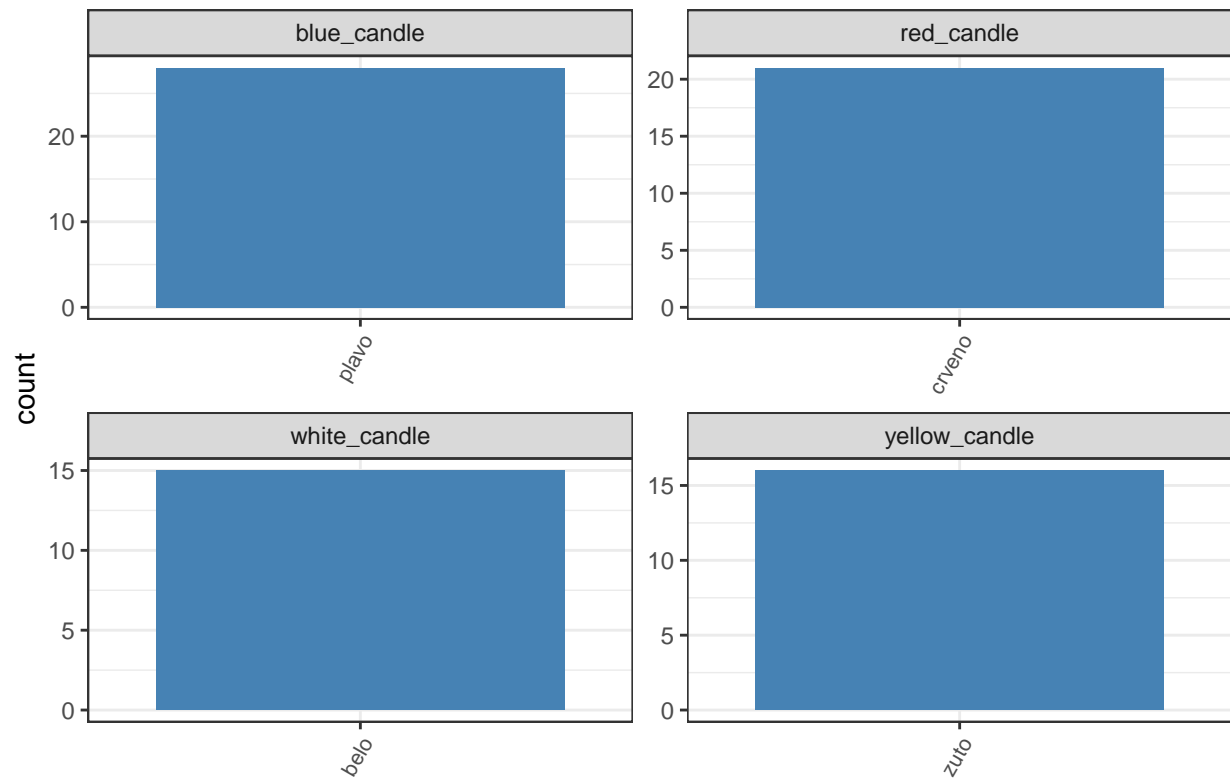

```
## 
## [[26]]
```

cap
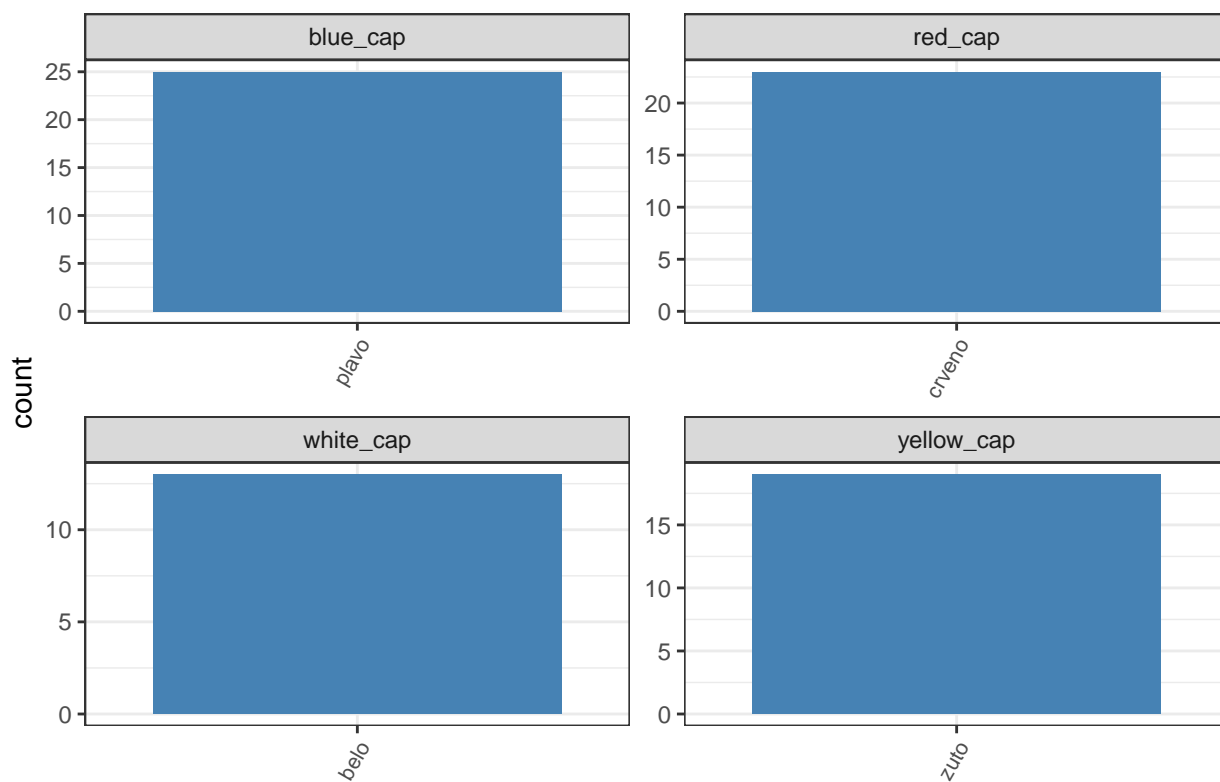

```
## 
## [[27]]
```

chair
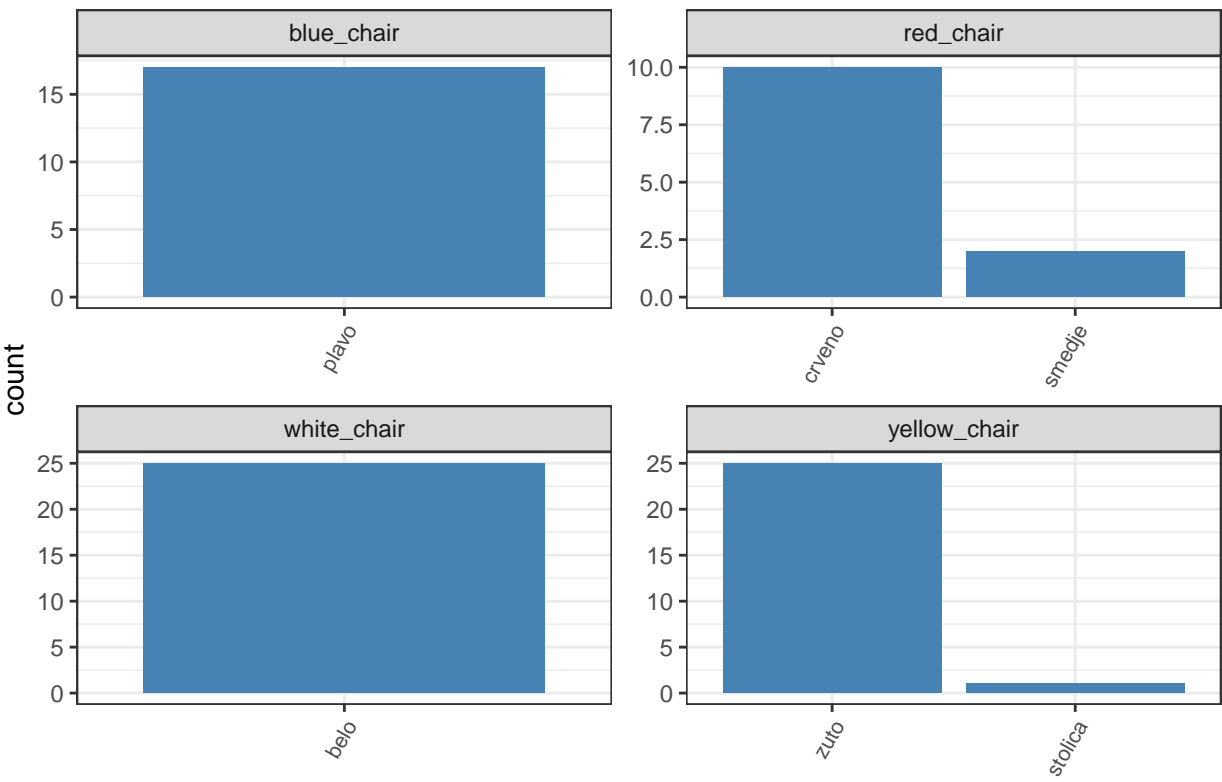

```
## 
## [[28]]
```

clock
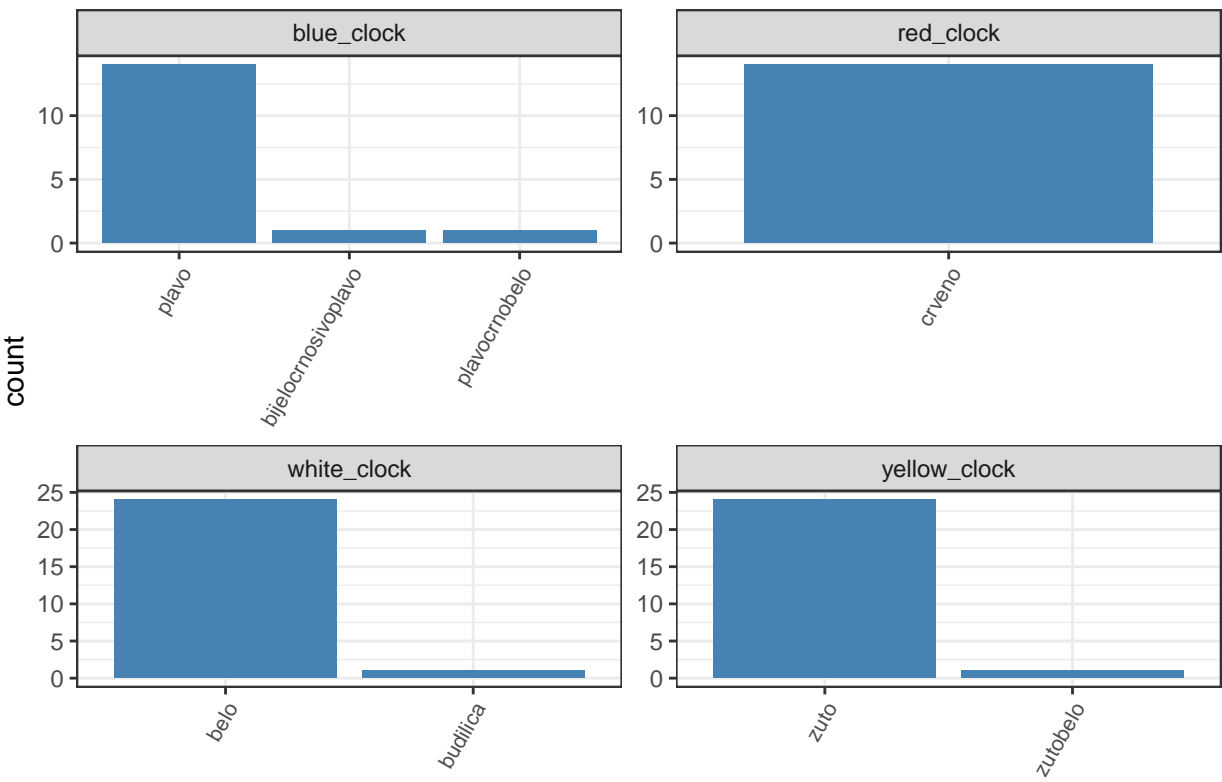

```
##
## [[29]]
```

coathanger
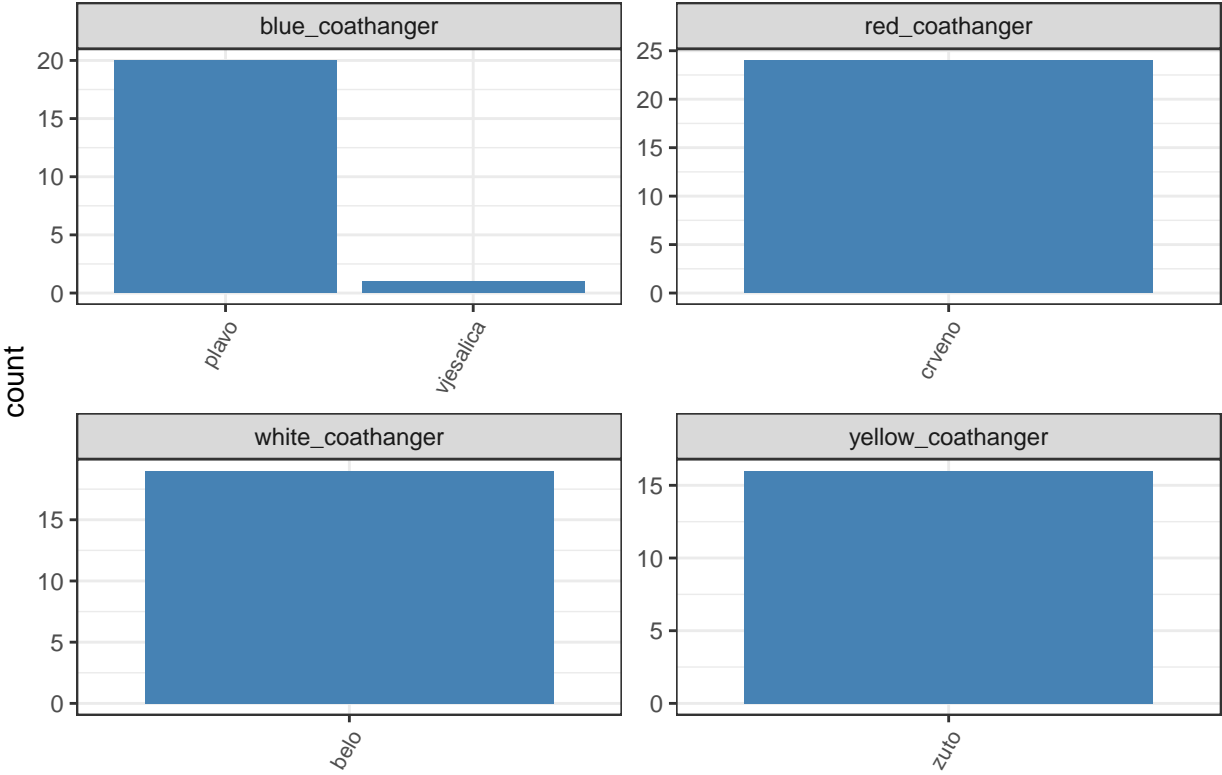

```
## 
## [[30]]
```

comb
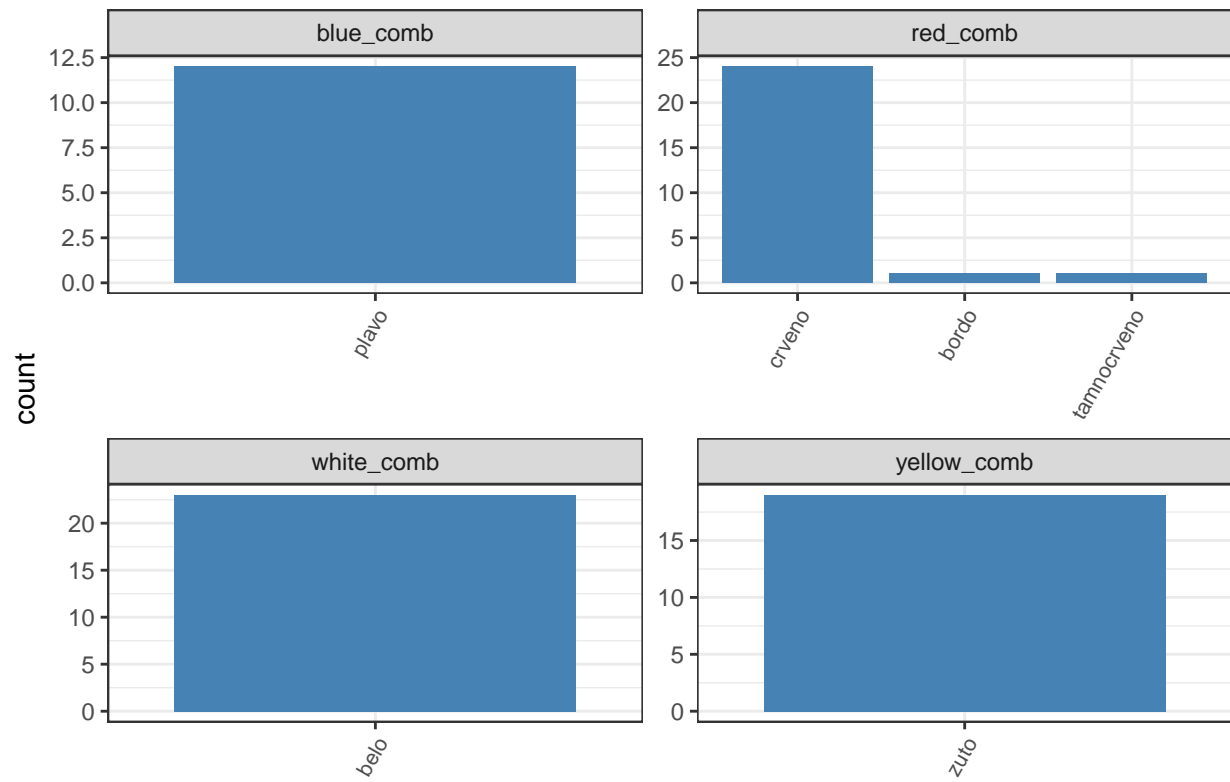

```
## 
## [[31]]
```

crown
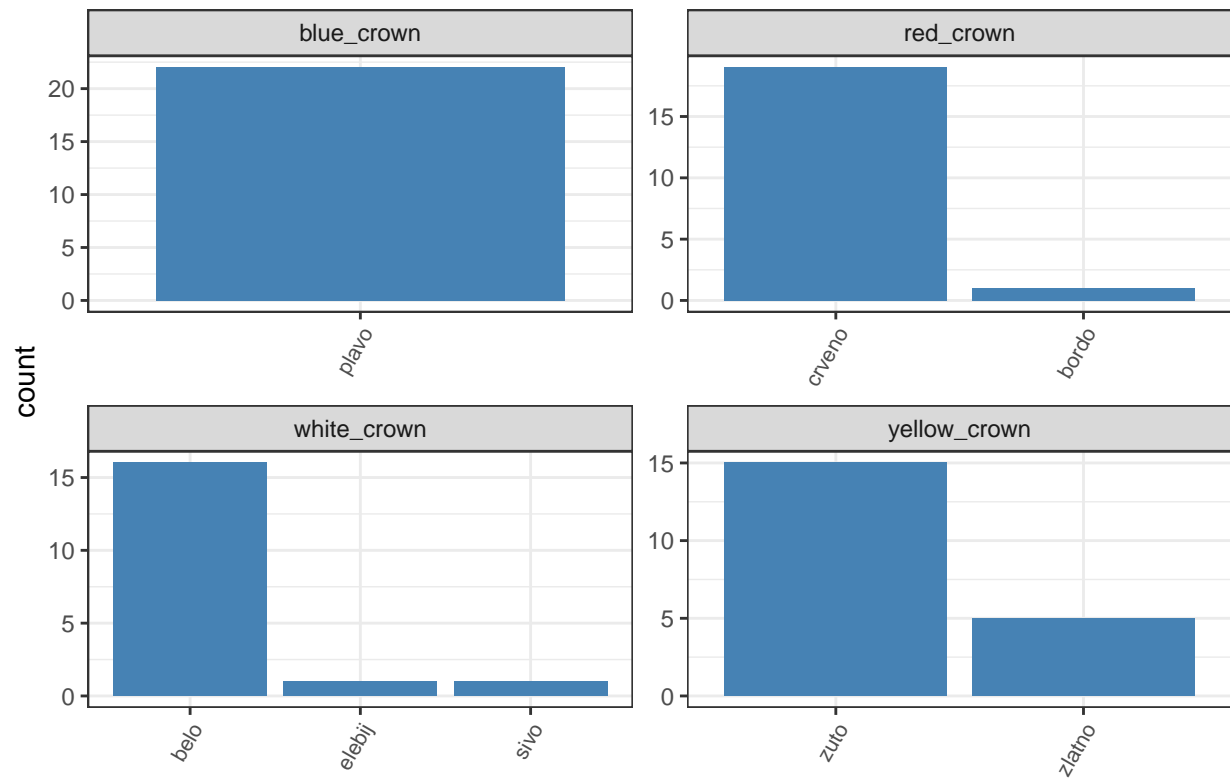

```
## 
## [[32]]
```

cushion


```
##
## [[33]]
```

die


```
## 
## [[34]]
```

door


```
##
## [[35]]
```
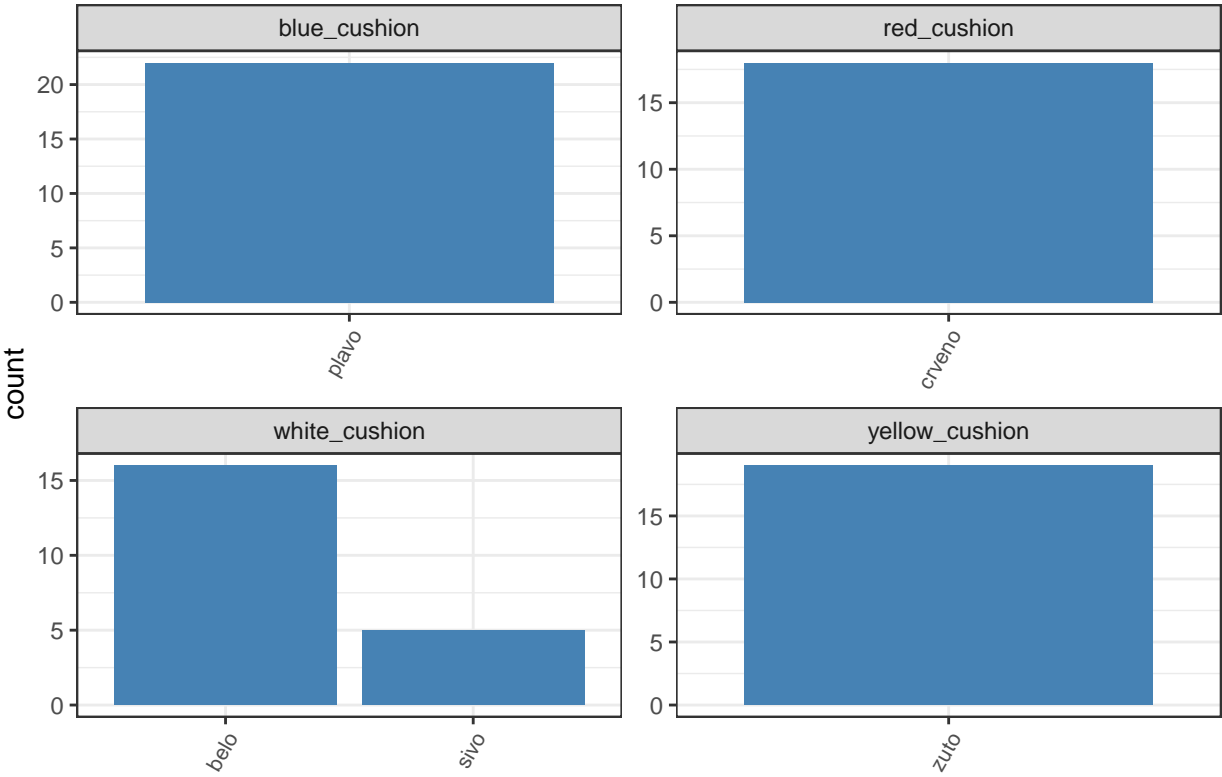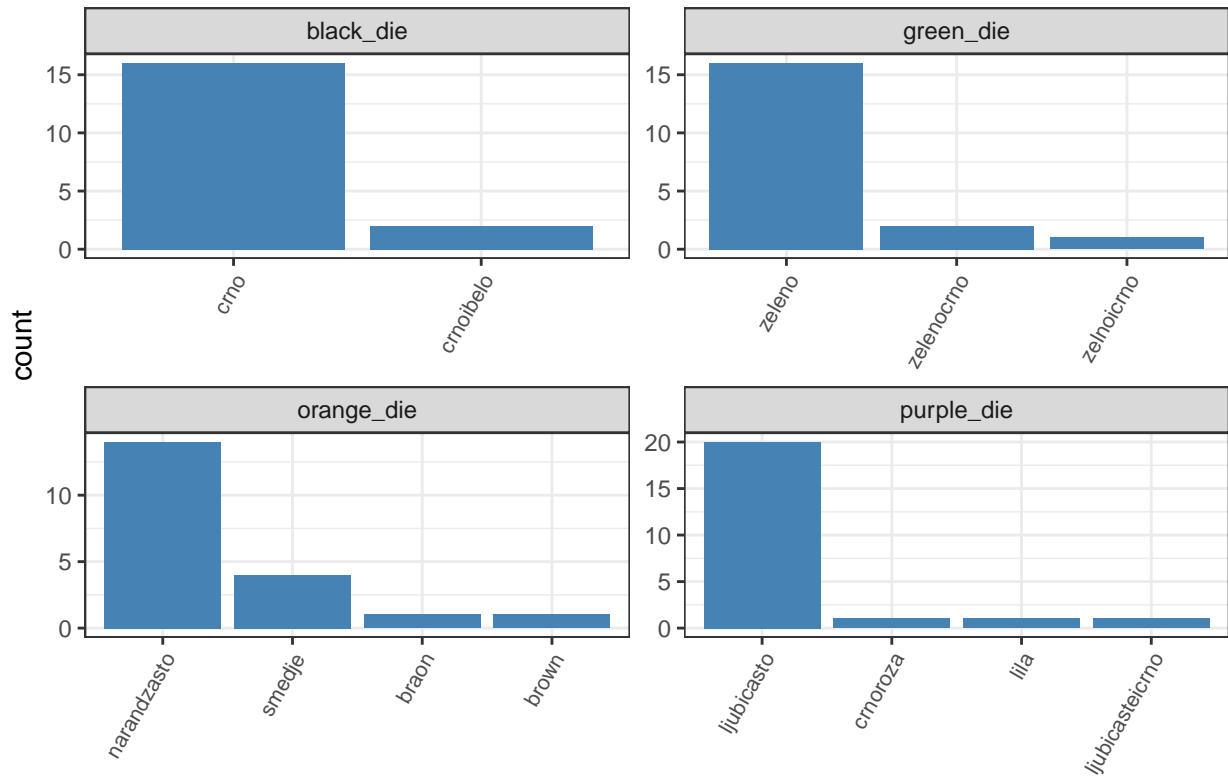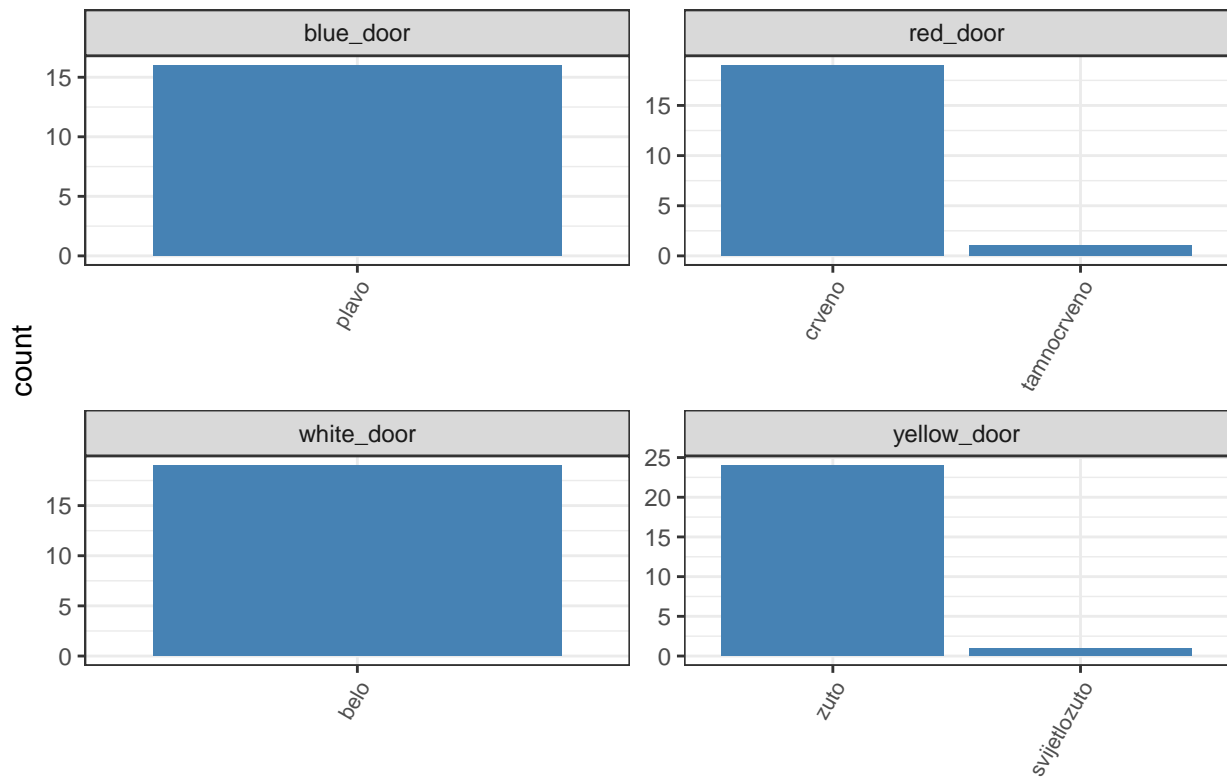
dss
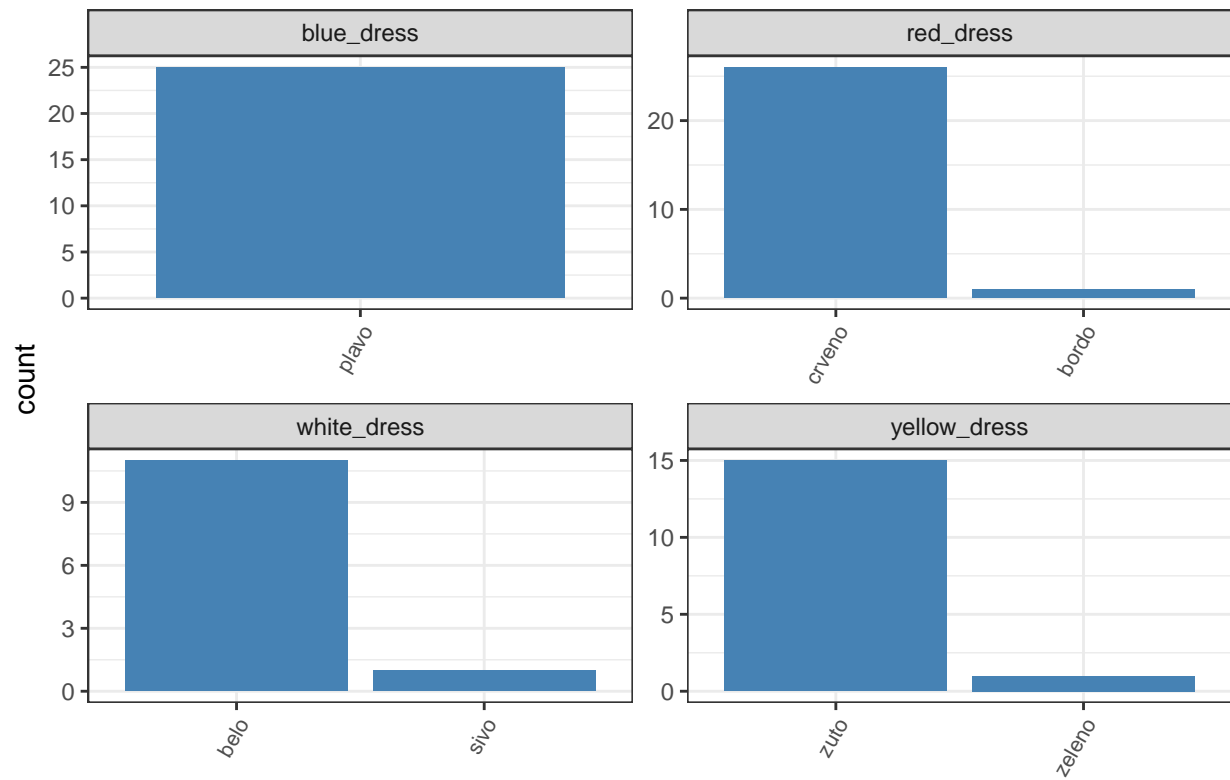

```
## 
## [[36]]
```

dresser
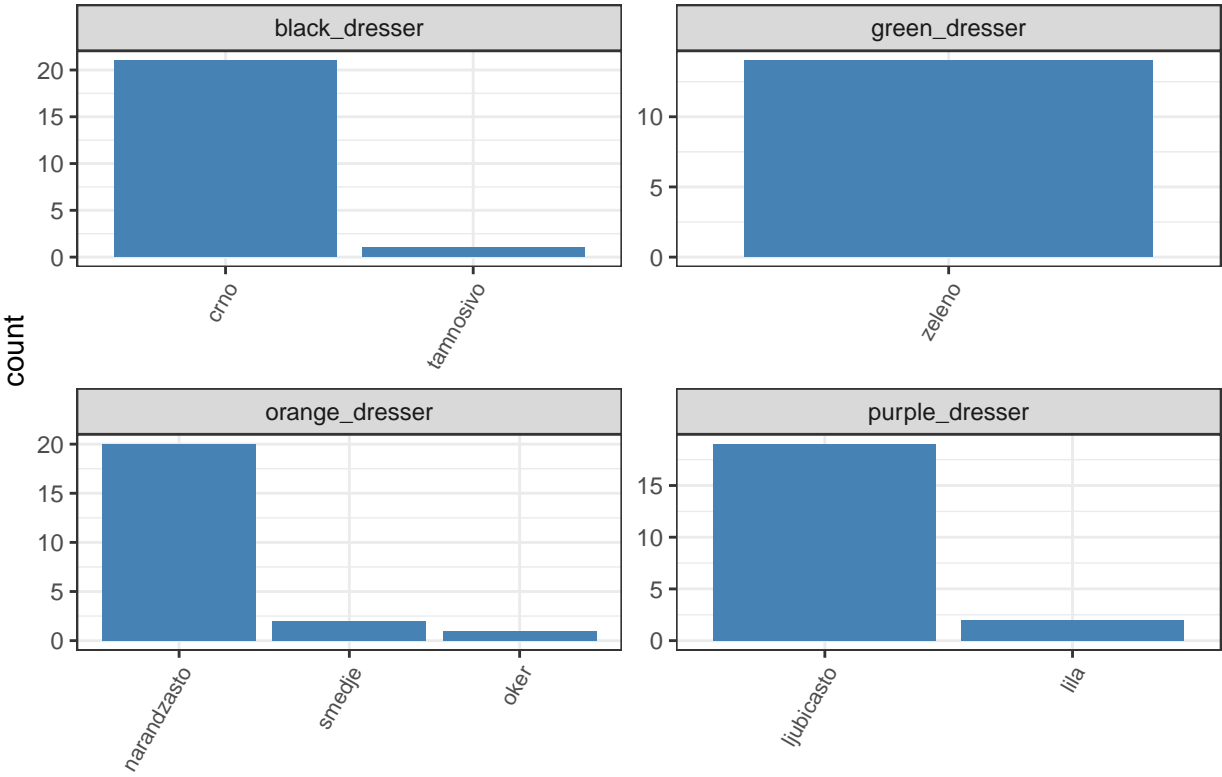

```
## 
## [[37]]
```

drum
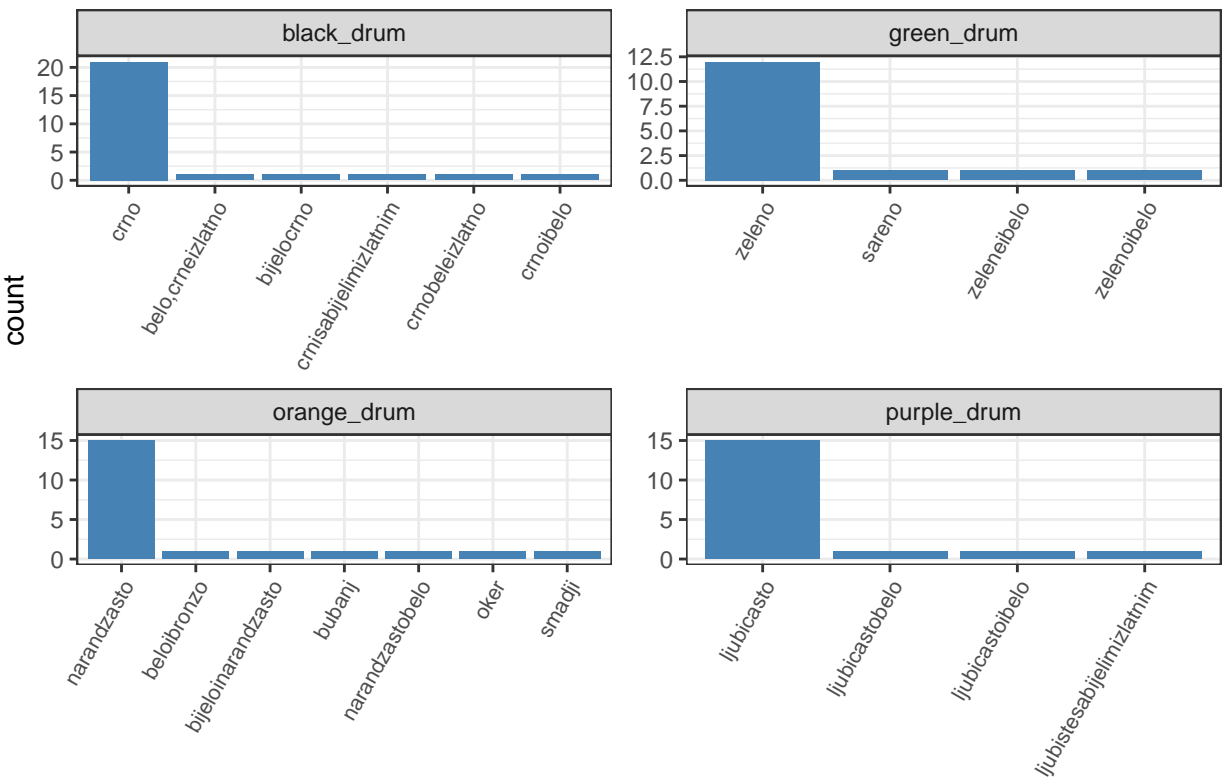

```
## 
## [[38]]
```

duck
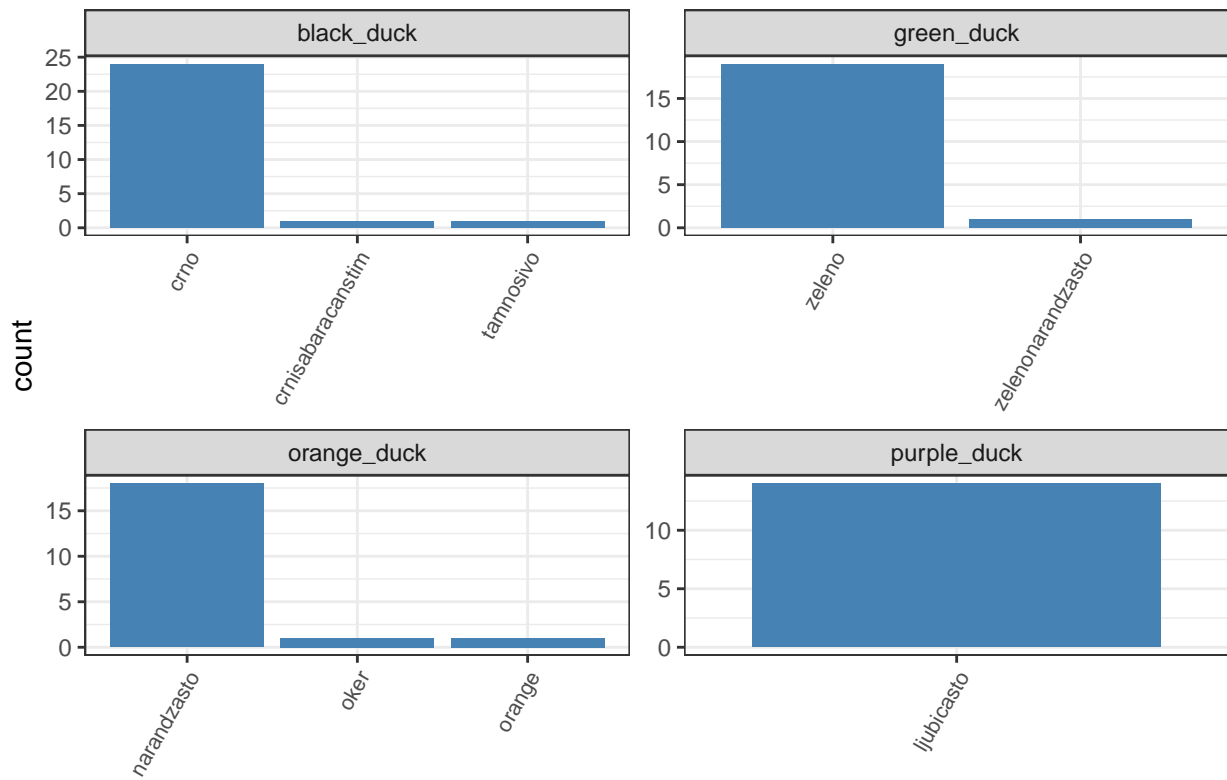

```
## 
## [[39]]
```

dustpan
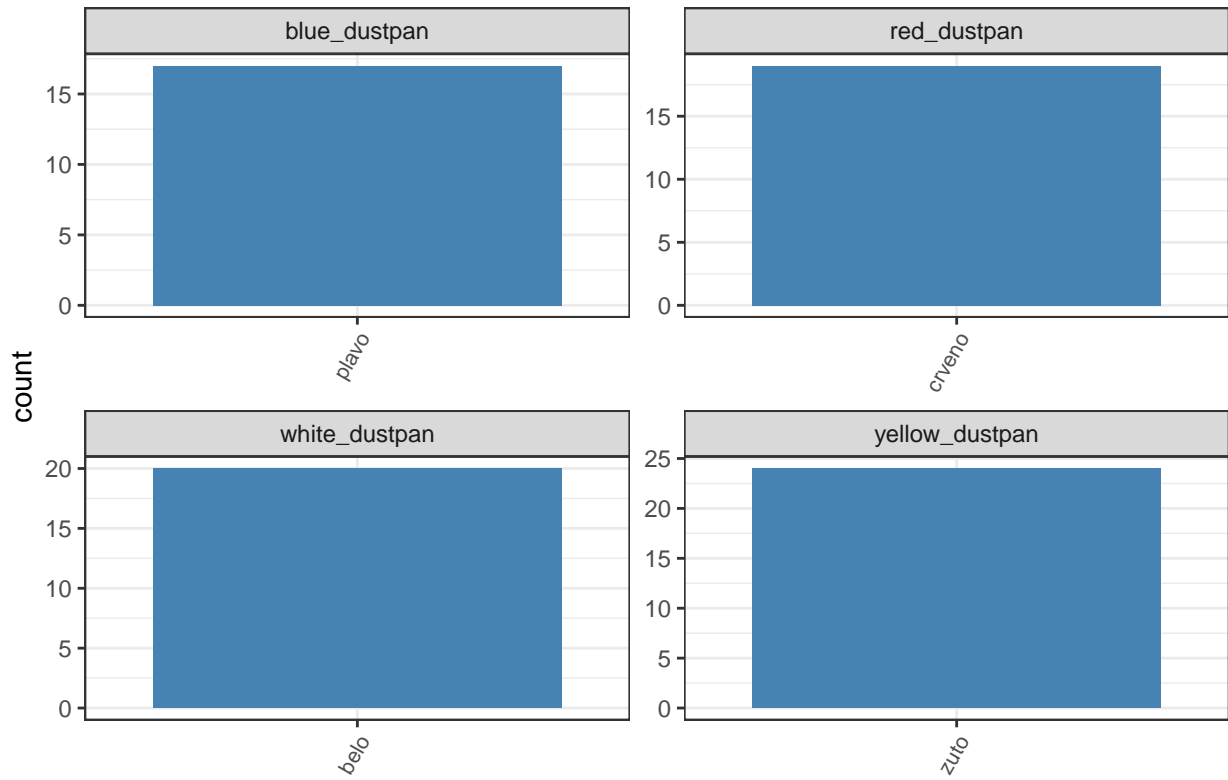

```
## 
## [[40]]
```

fence
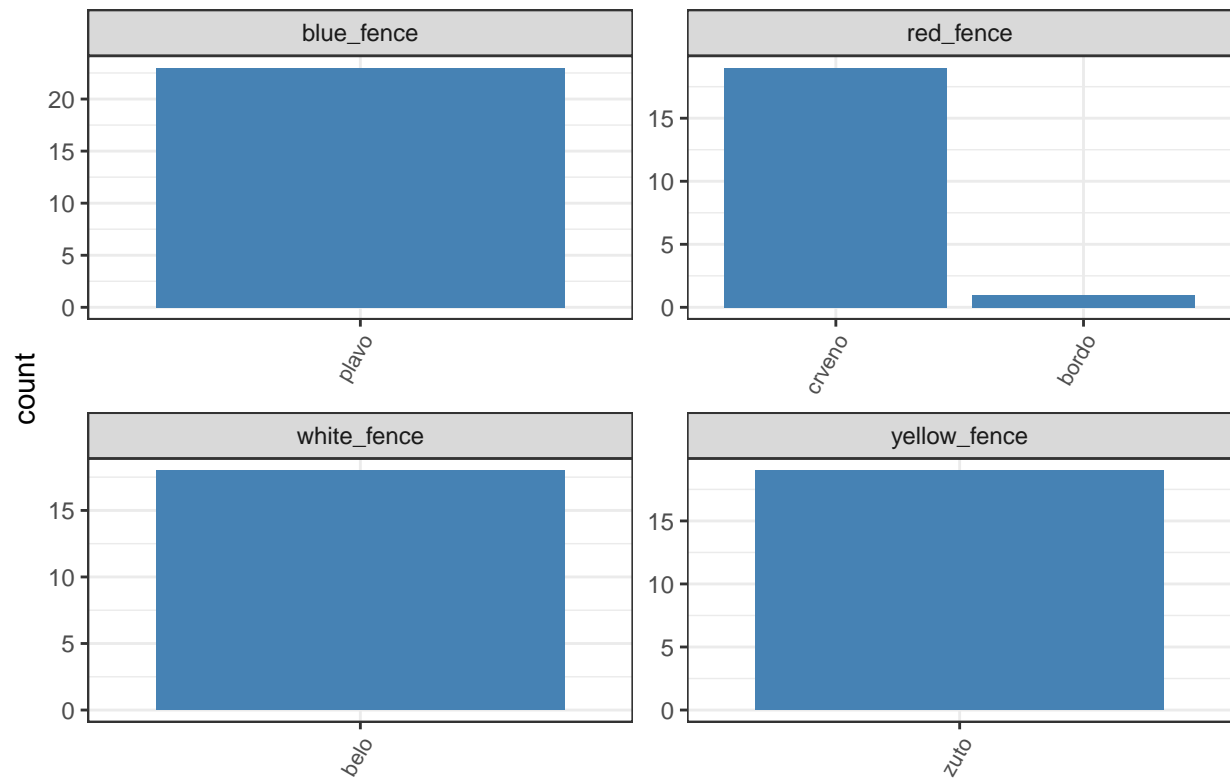

```
## 
## [[41]]
```

fish
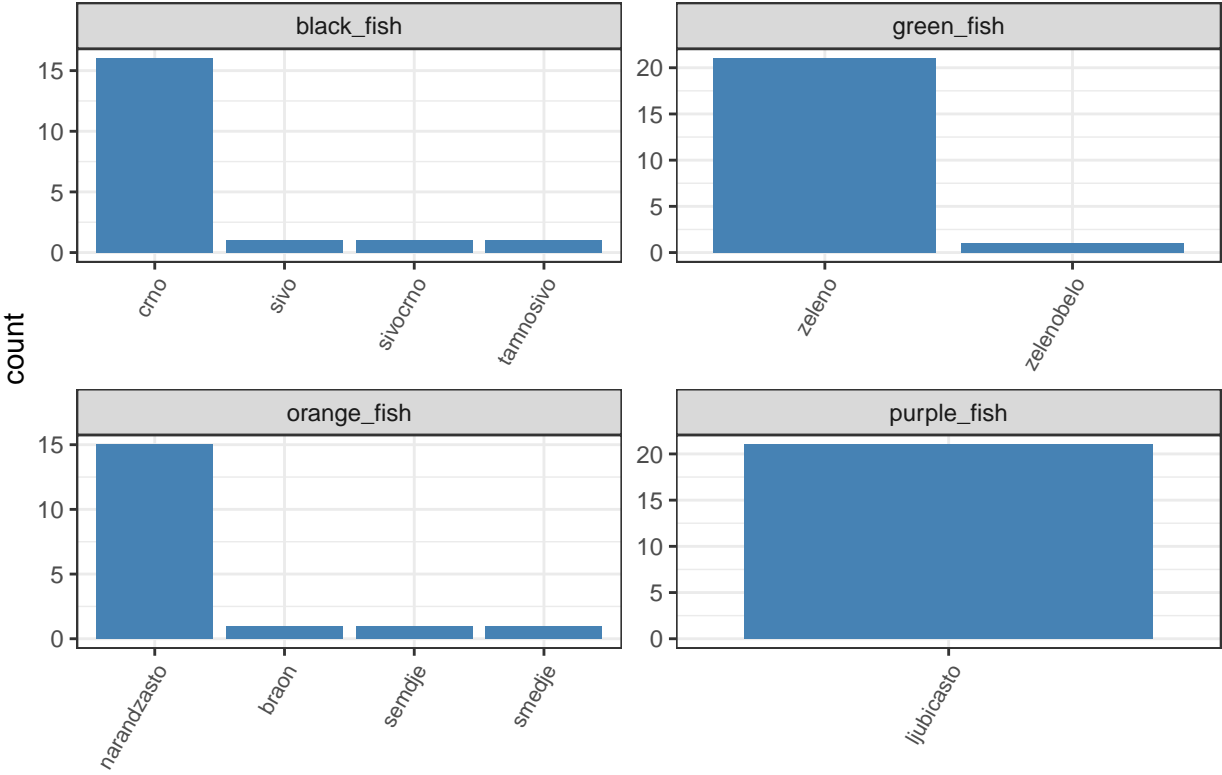

```
## 
## [[42]]
```

flower
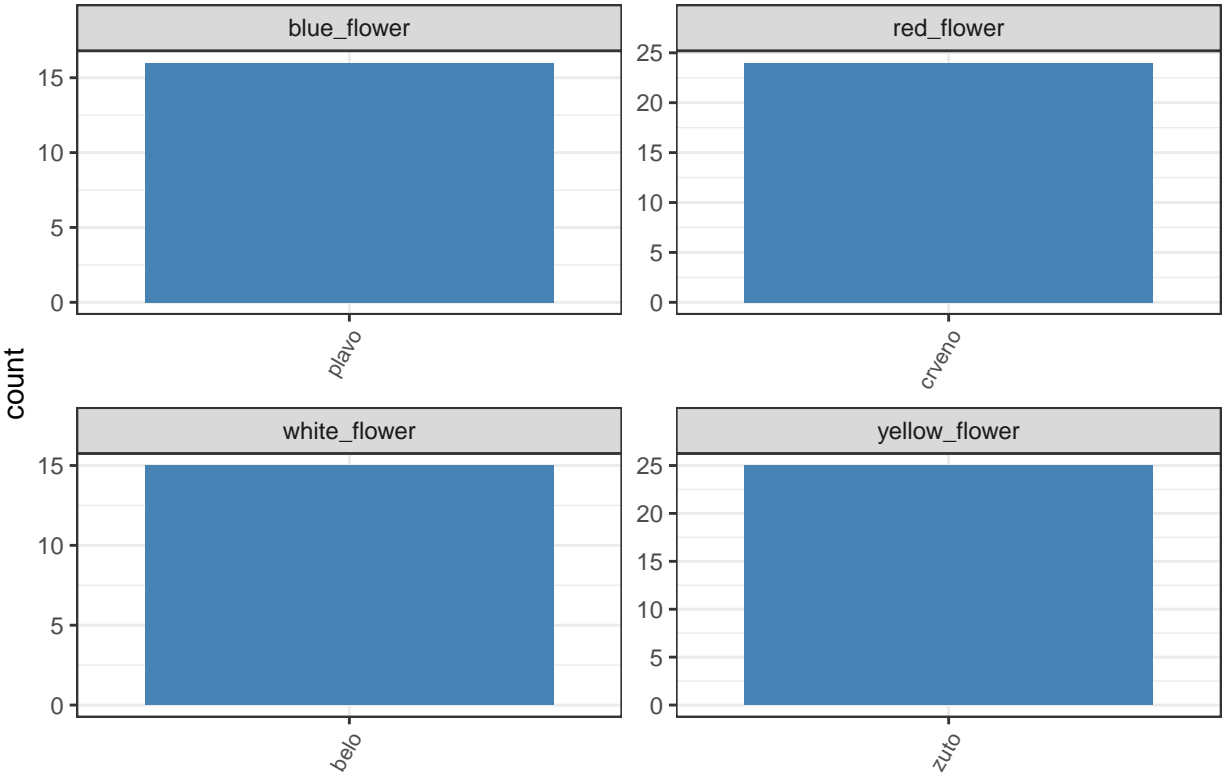

```
##
## [[43]]
```

fork
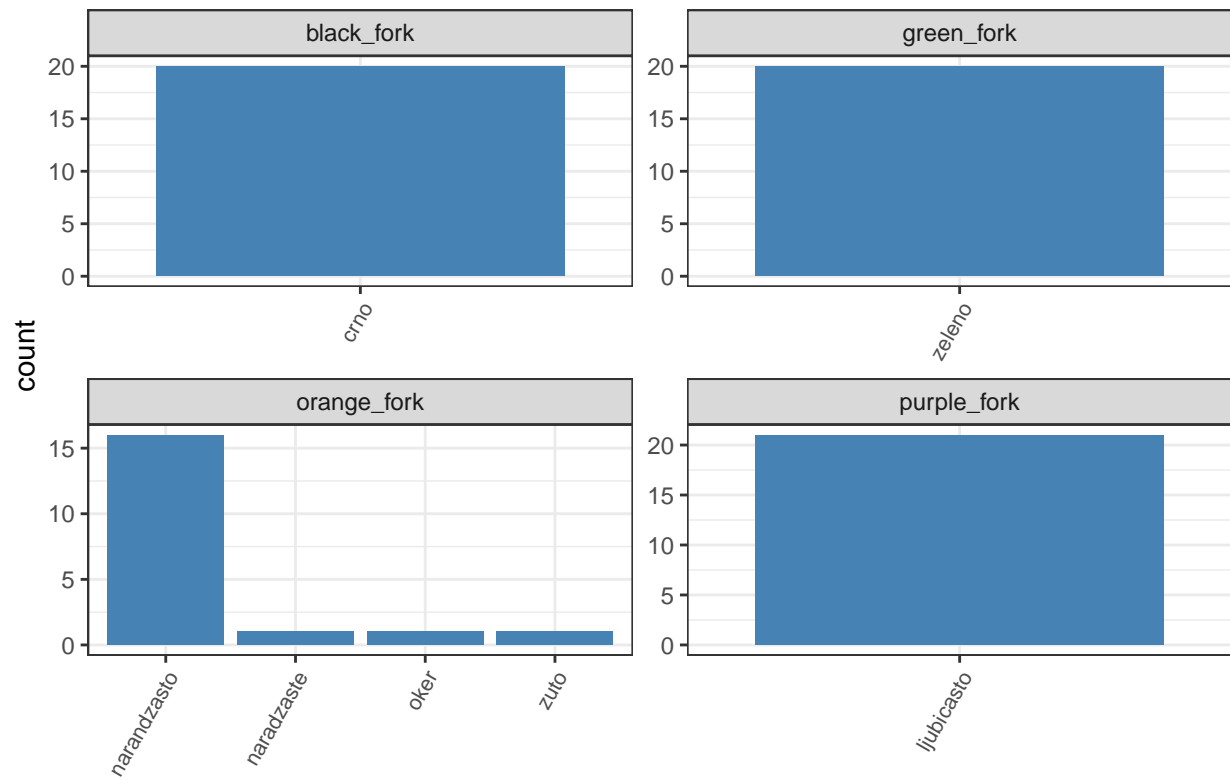

```
##
## [[44]]
```

frame
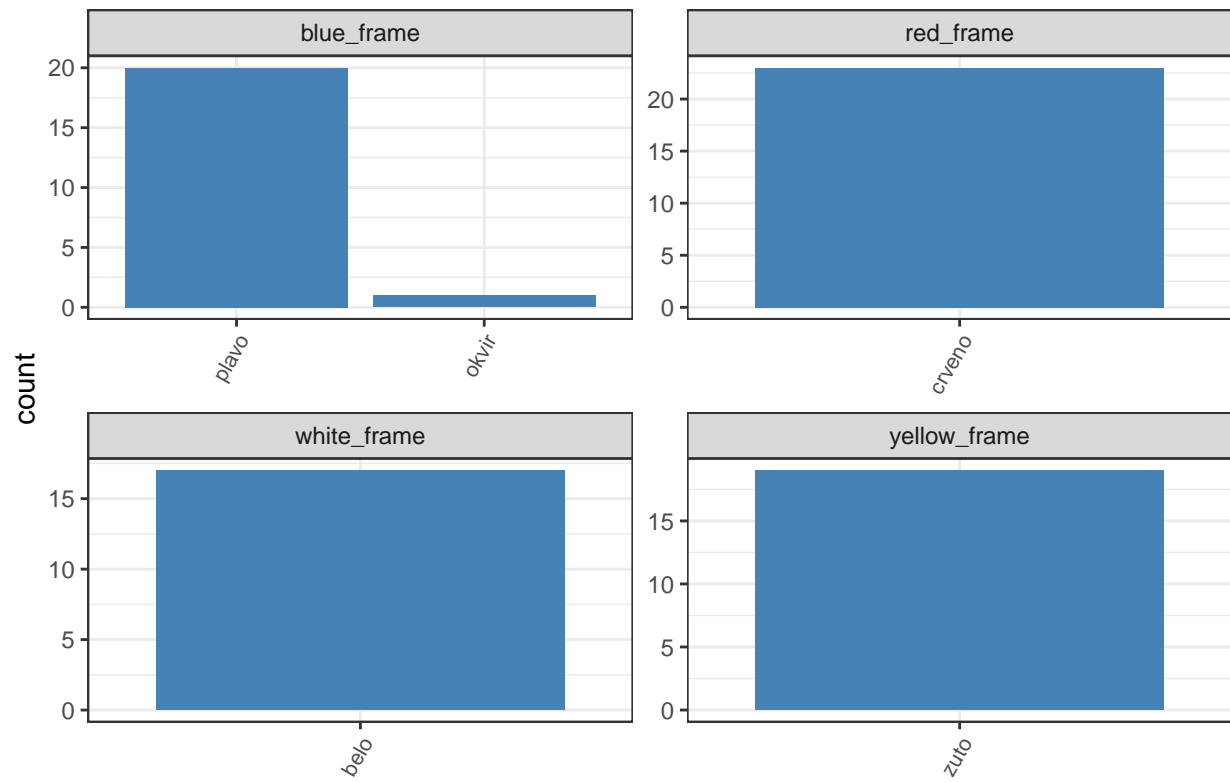

```
##
## [[45]]
```

fryingpan
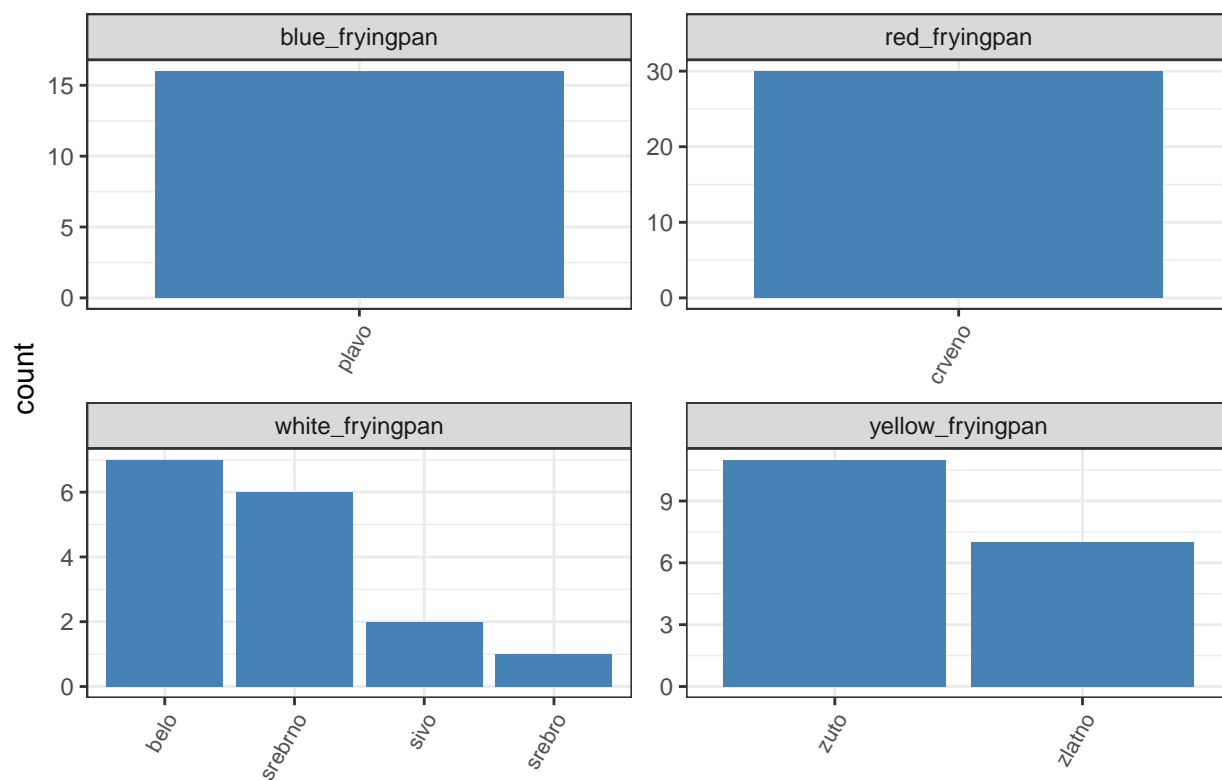

```
##
## [[46]]
```

glove
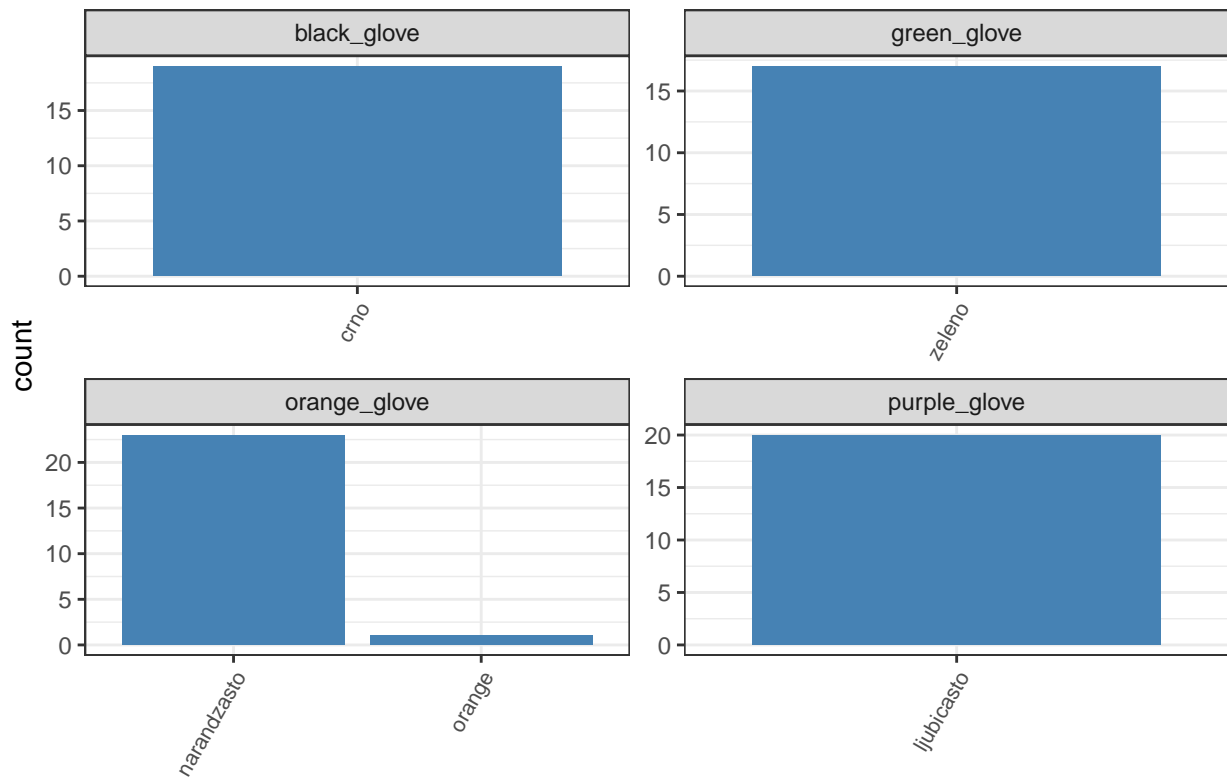

```
## 
## [[47]]
```

guitar
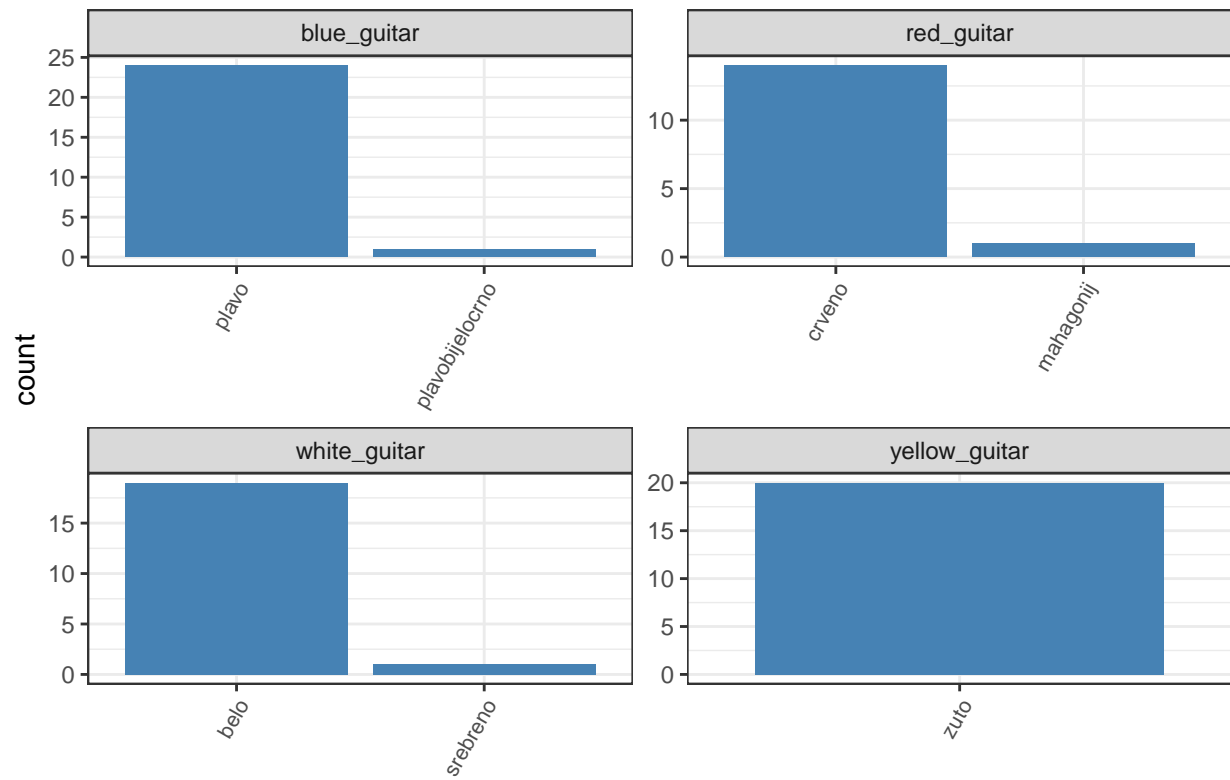

```
## 
## [[48]]
```

hammer
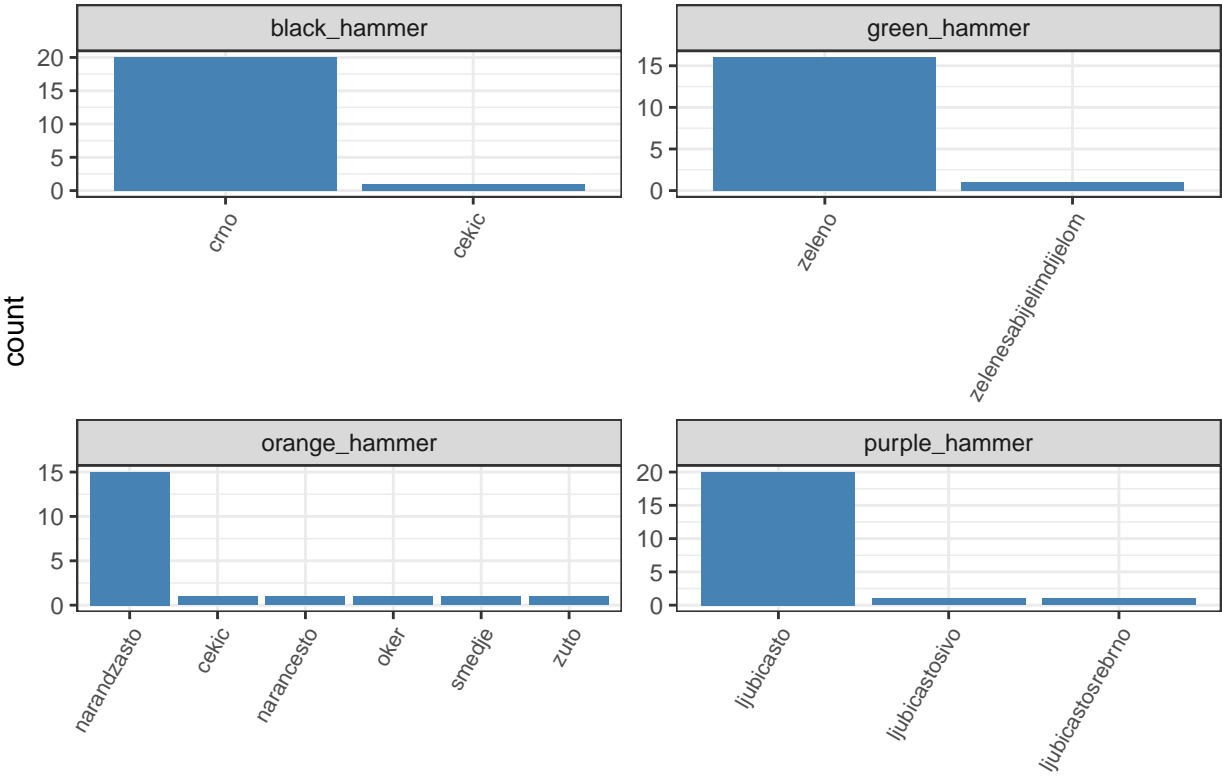

```
## 
## [[49]]
```

helicopter
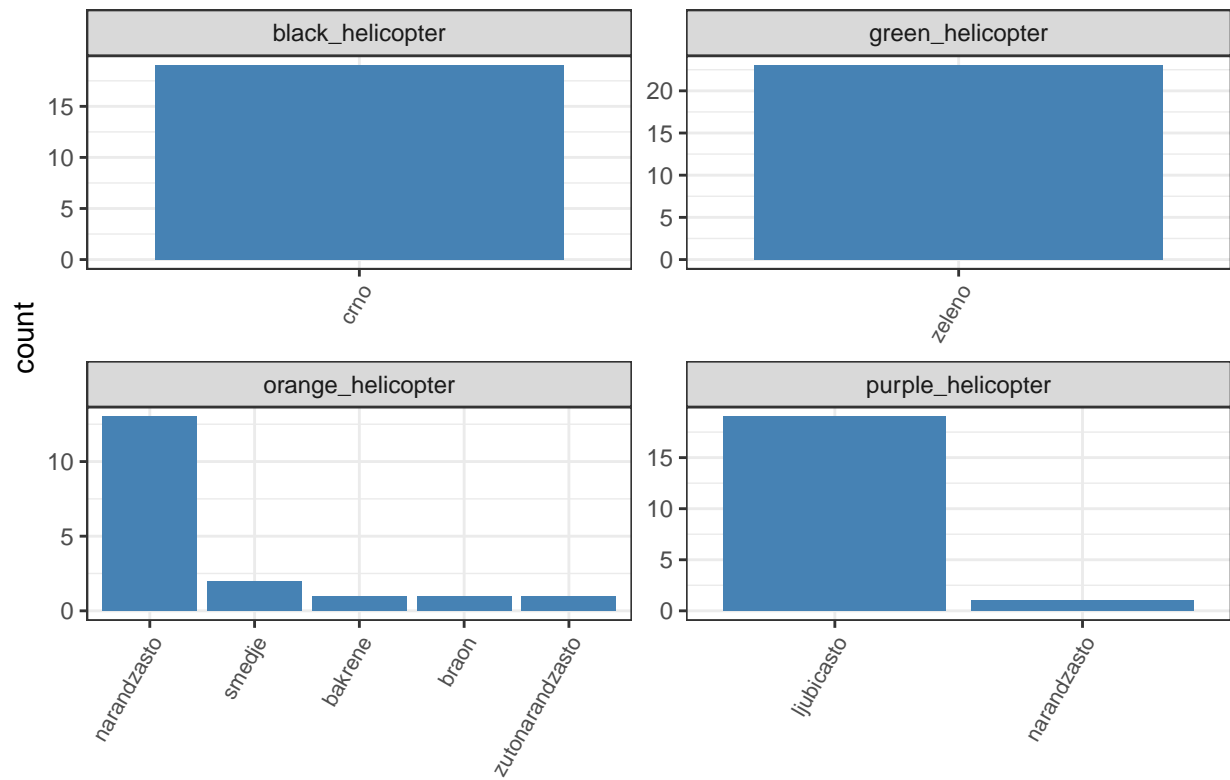

```
##
## [[50]]
```

iron
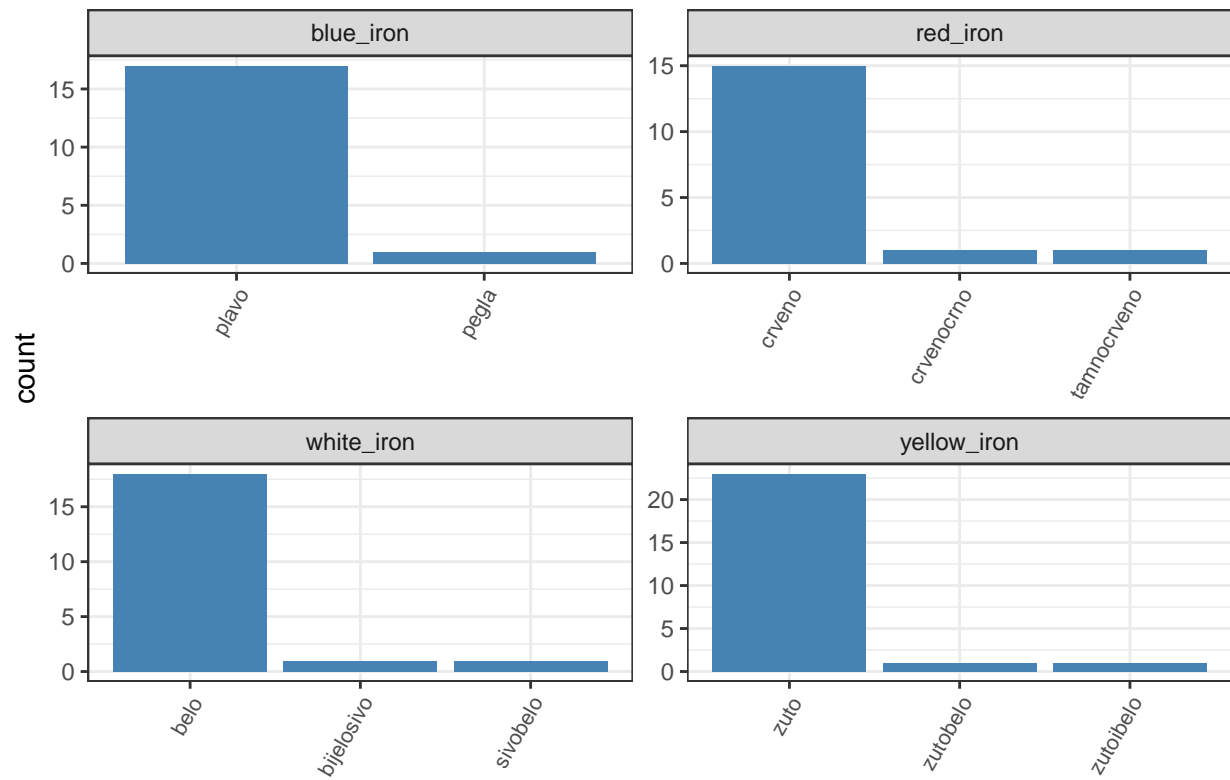

```
##
## [[51]]
```

key
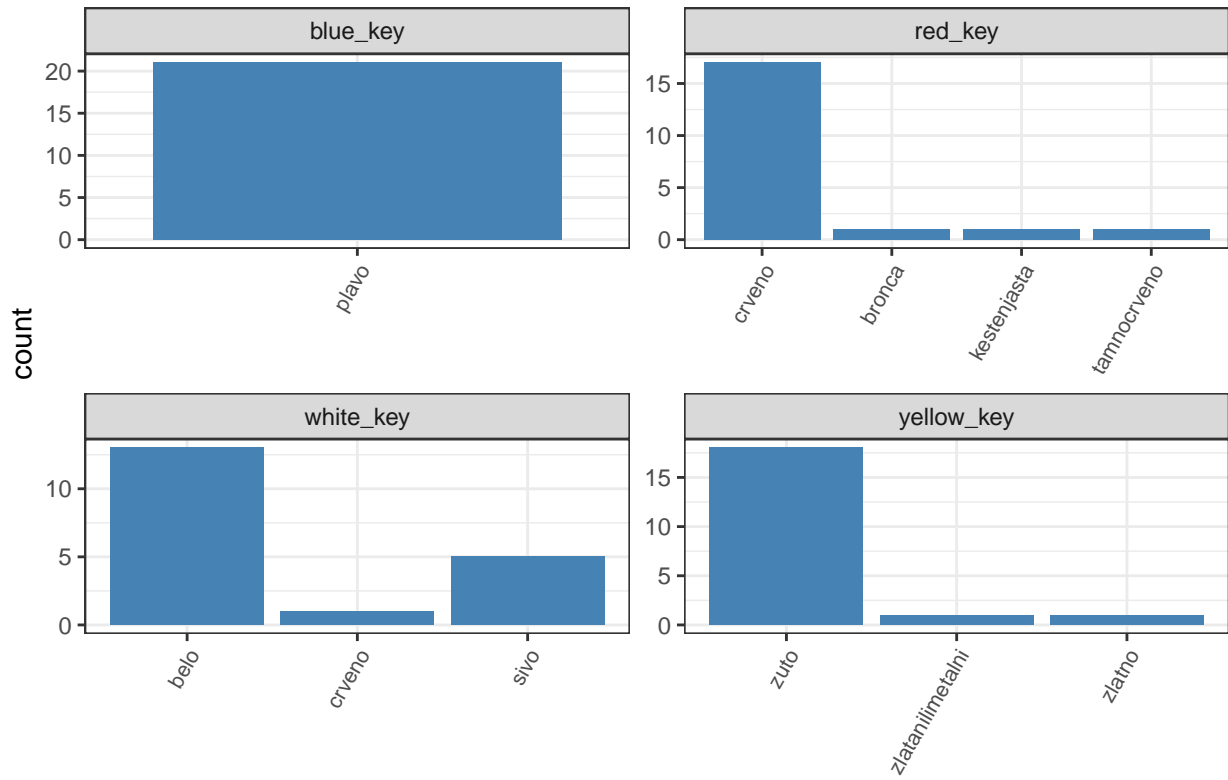

```
## 
## [[52]]
```

knife
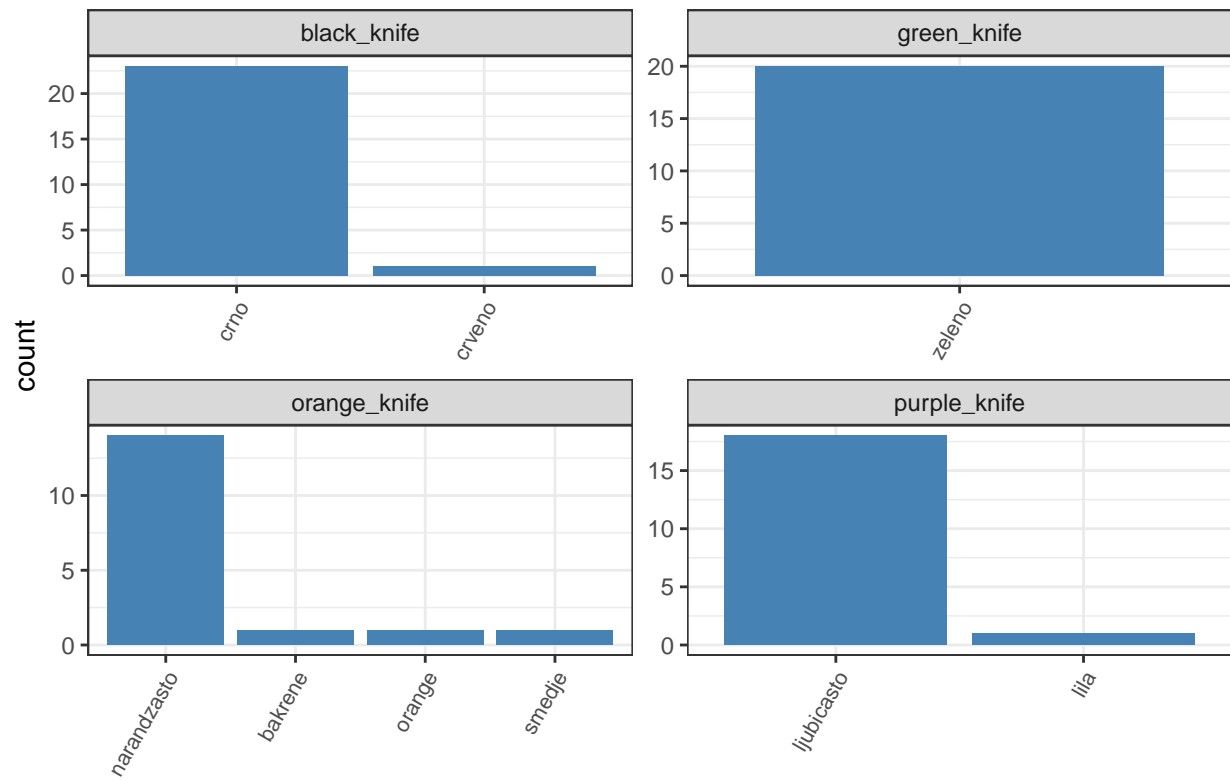

```
## 
## [[53]]
```

ladle
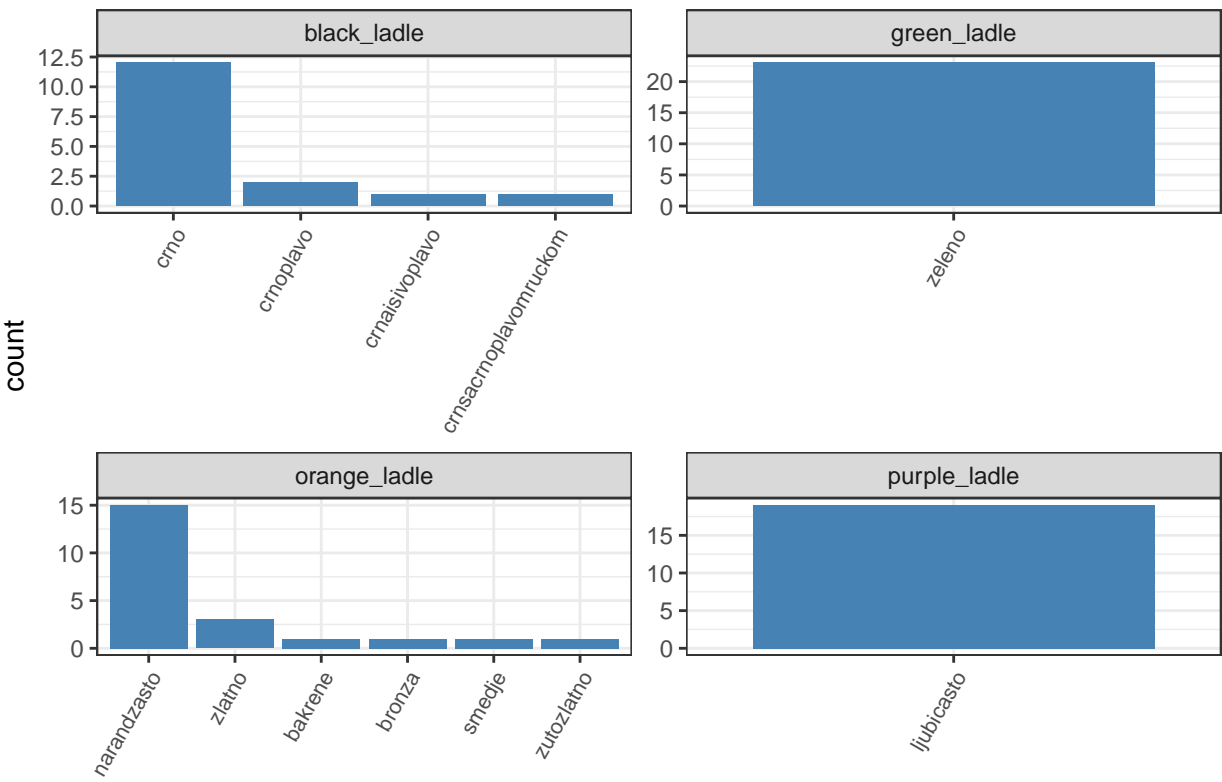

```
## 
## [[54]]
```

lamp
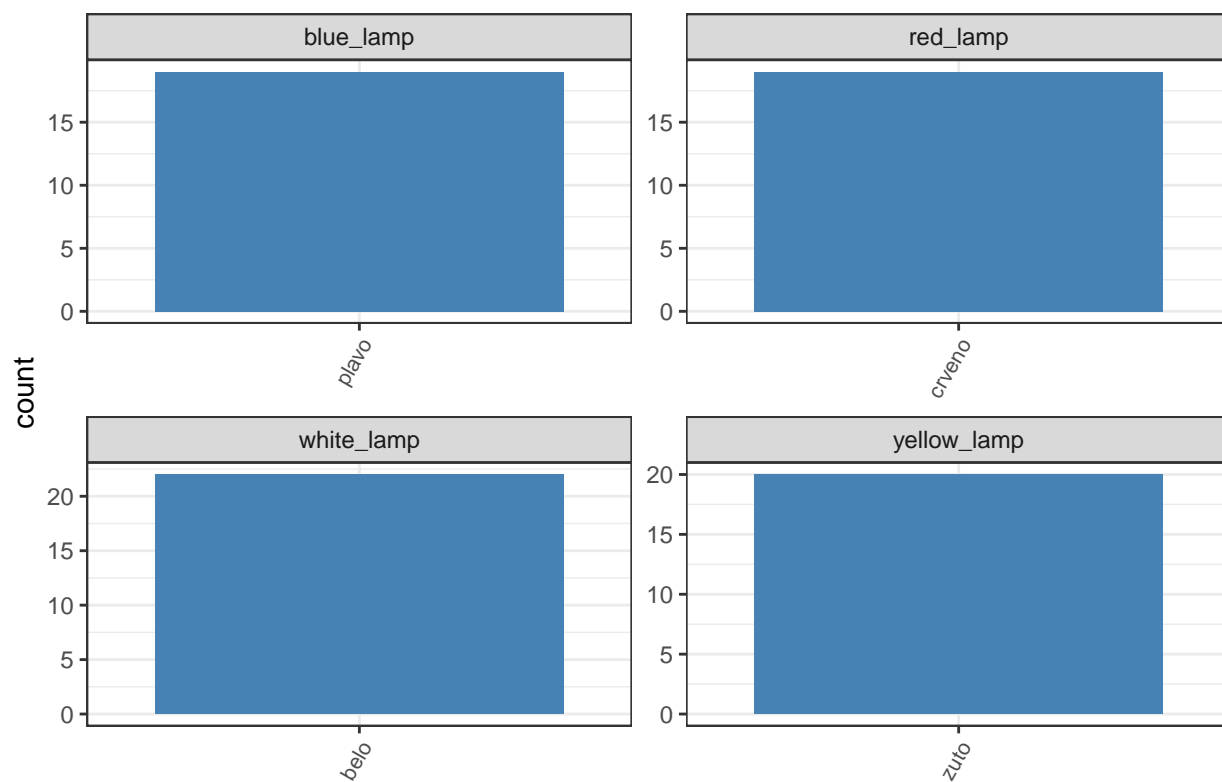

```
## 
## [[55]]
```

lipstick
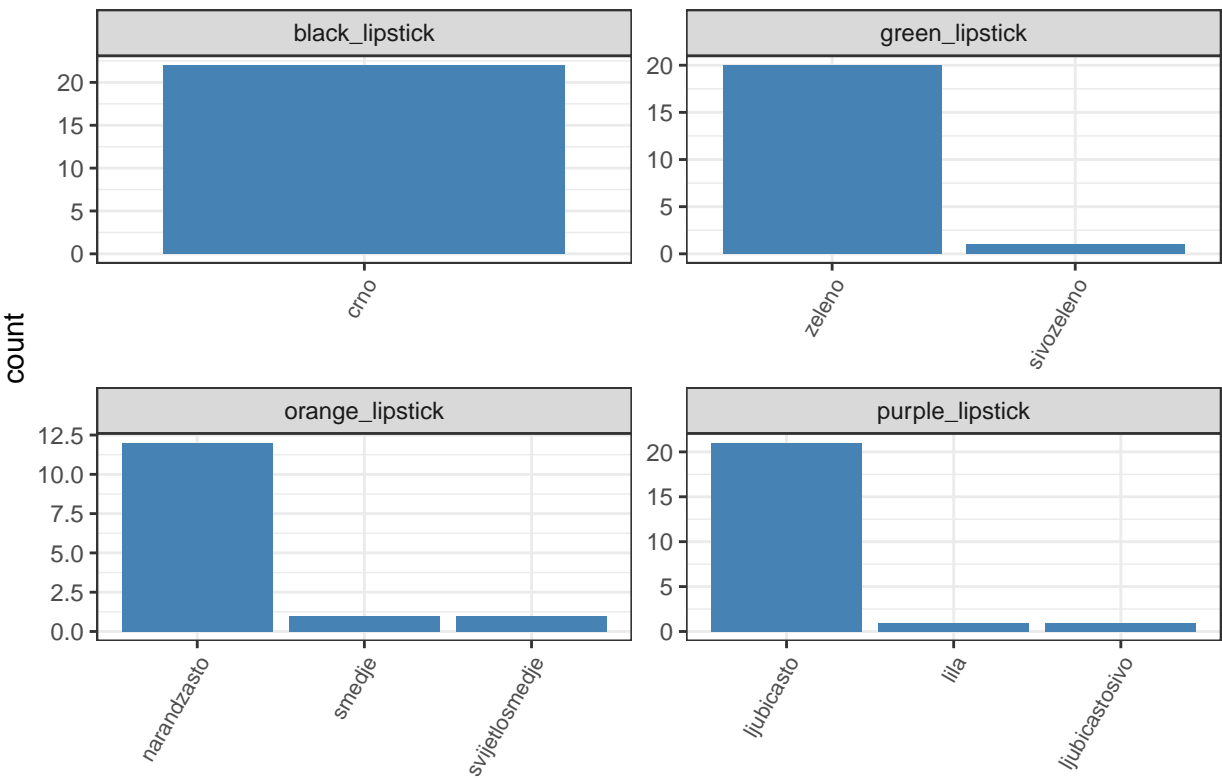
[[56]]

lock
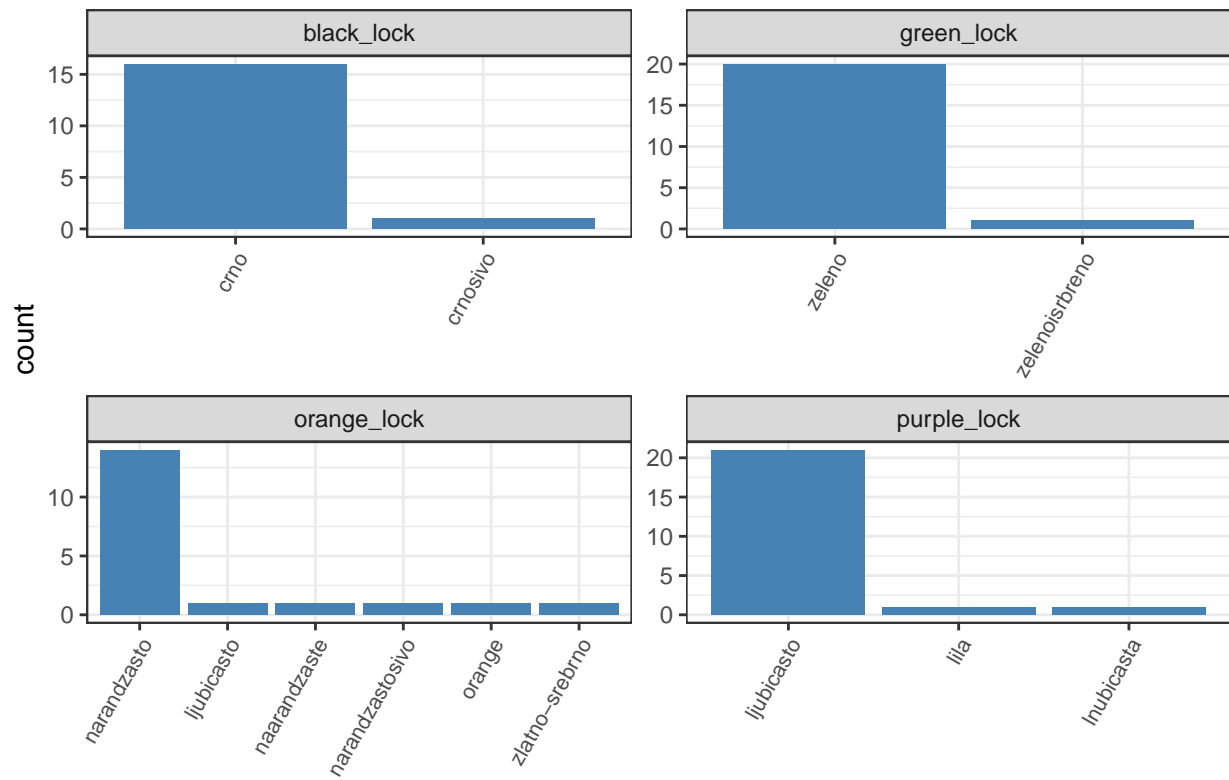

```
##
## [[57]]
```

luggage
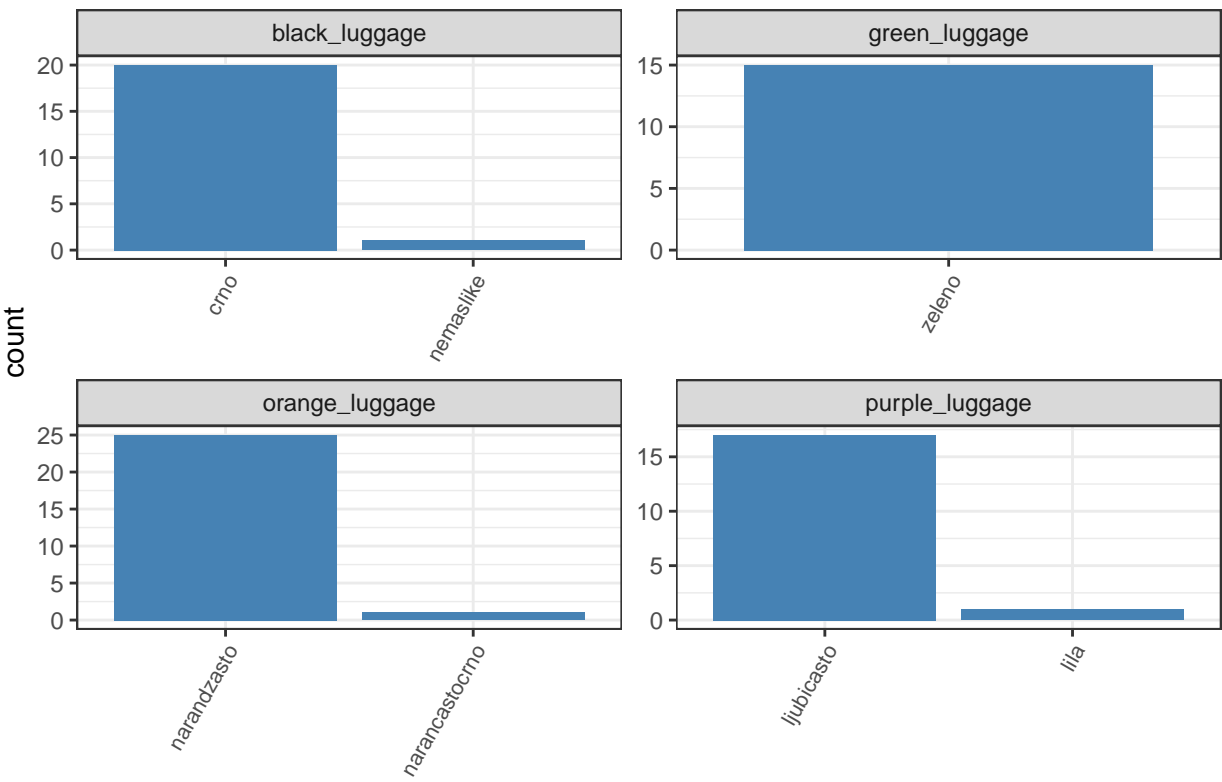

```
## 
## [[58]]
```

magnifyingglass
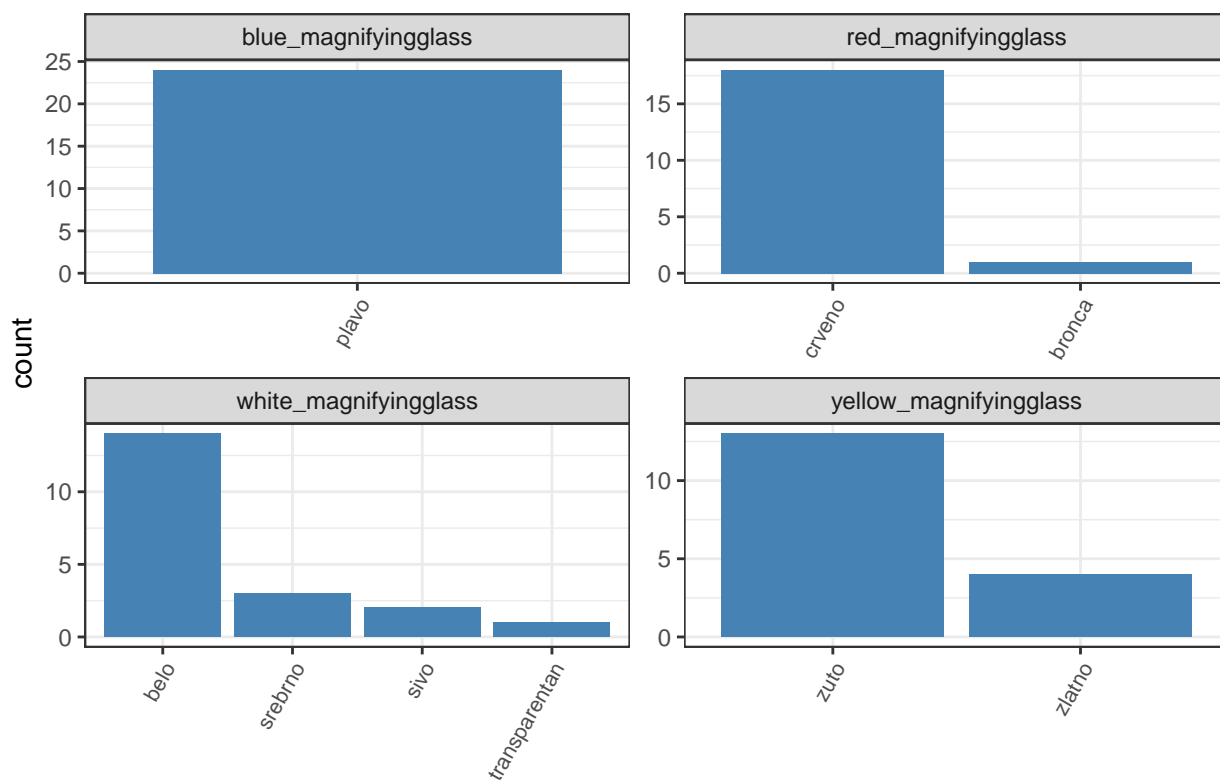

```
##
## [[59]]
```

mask
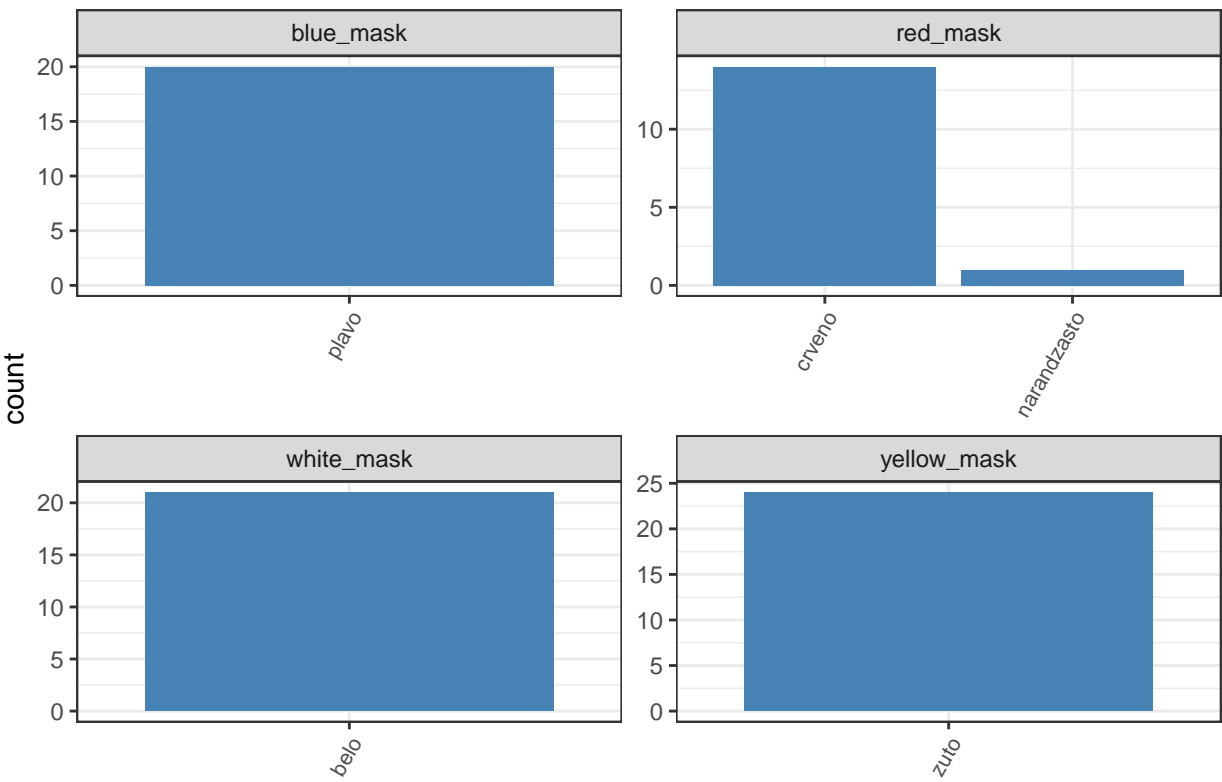

```
## 
## [[60]]
```

microscope
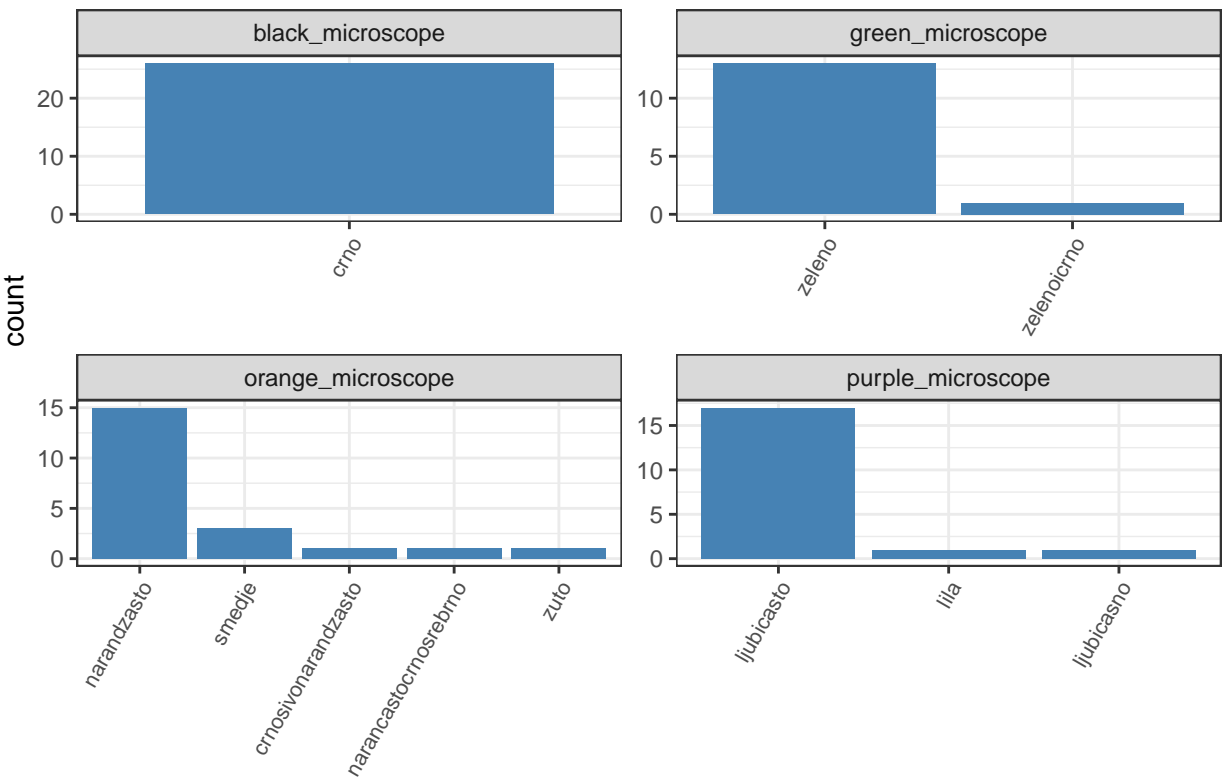

```
##
## [[61]]
```

mouse
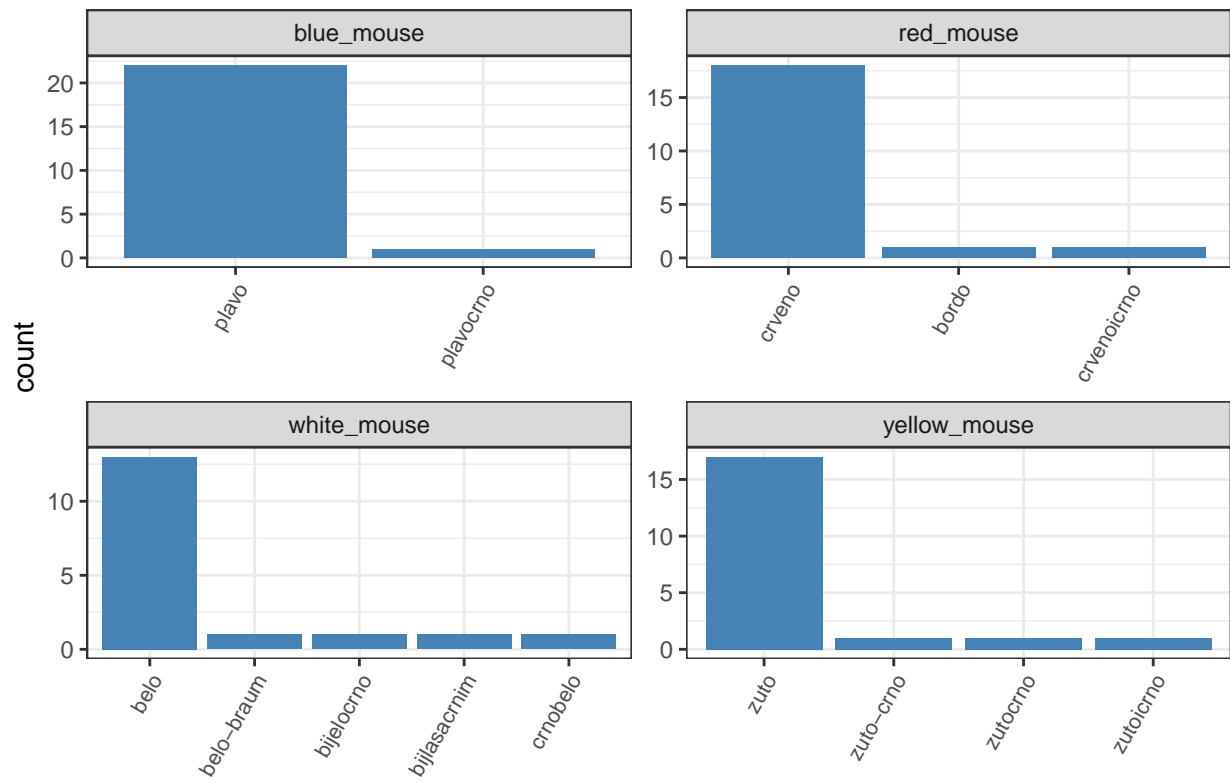

```
## 
## [[62]]
```

mug
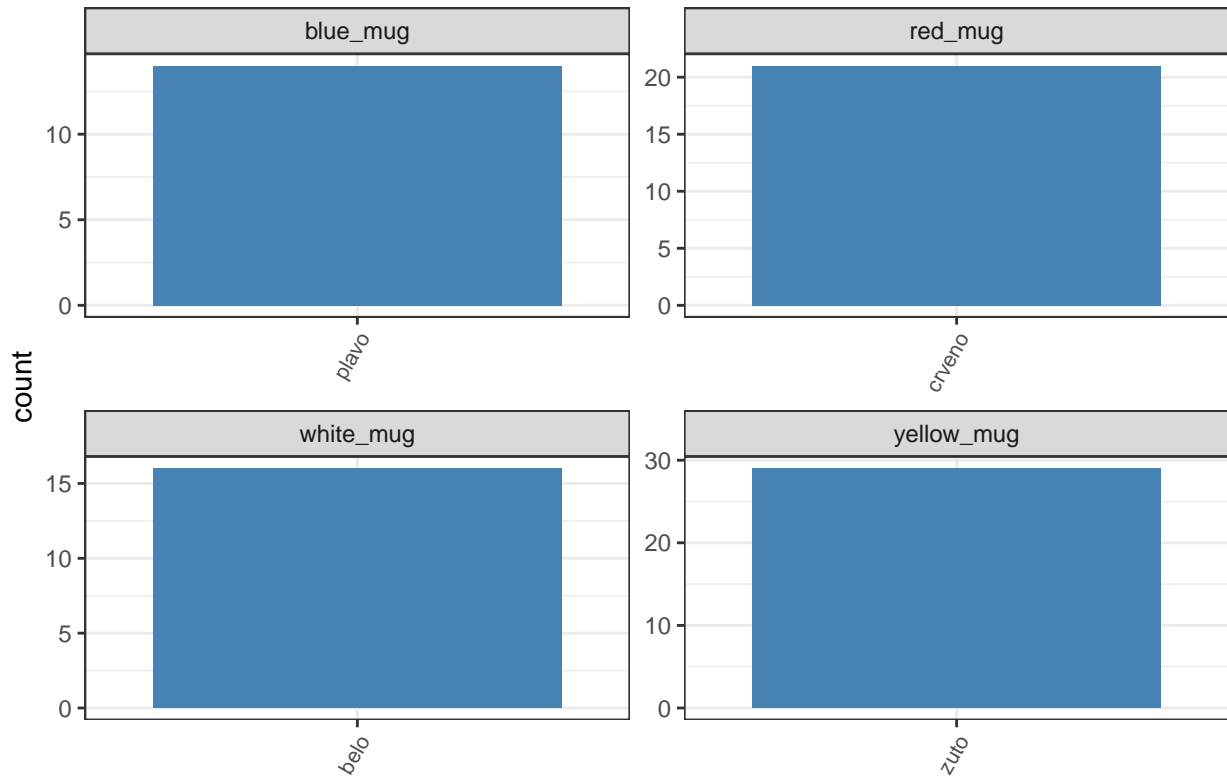

```
##
## [[63]]
```

napkin
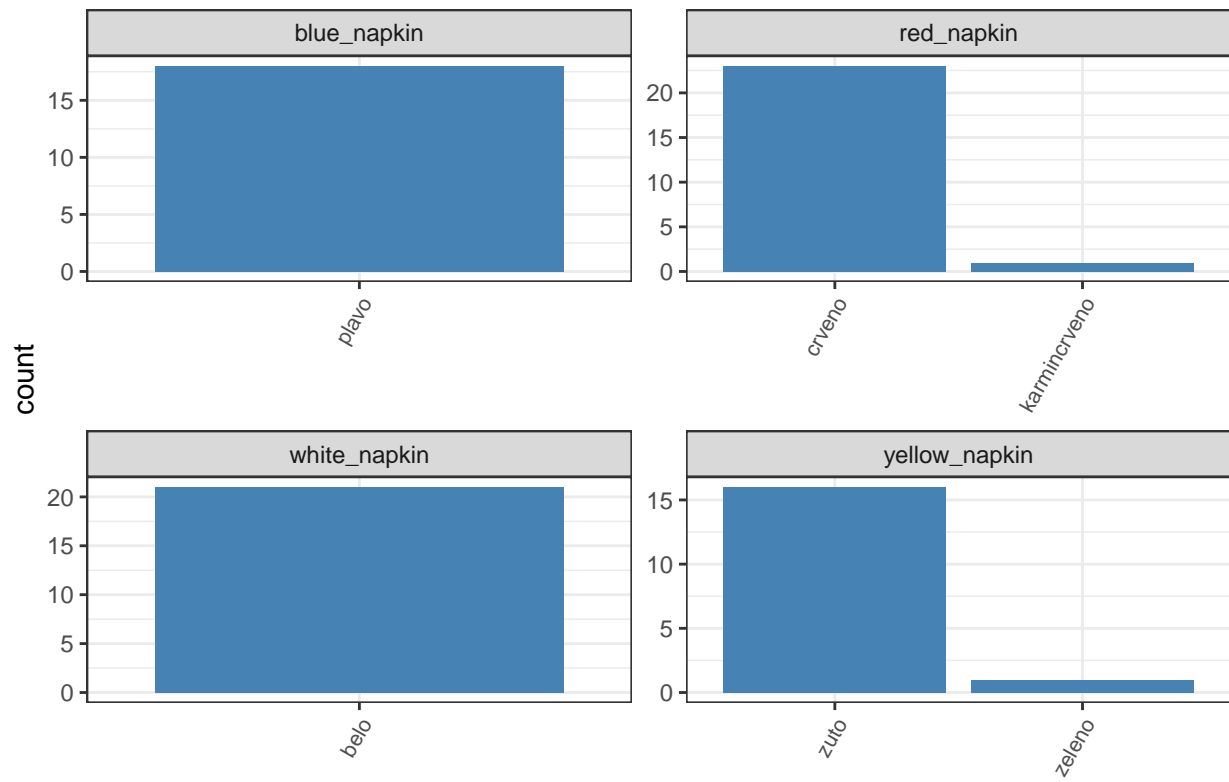

```
## 
## [[64]]
```

necklace
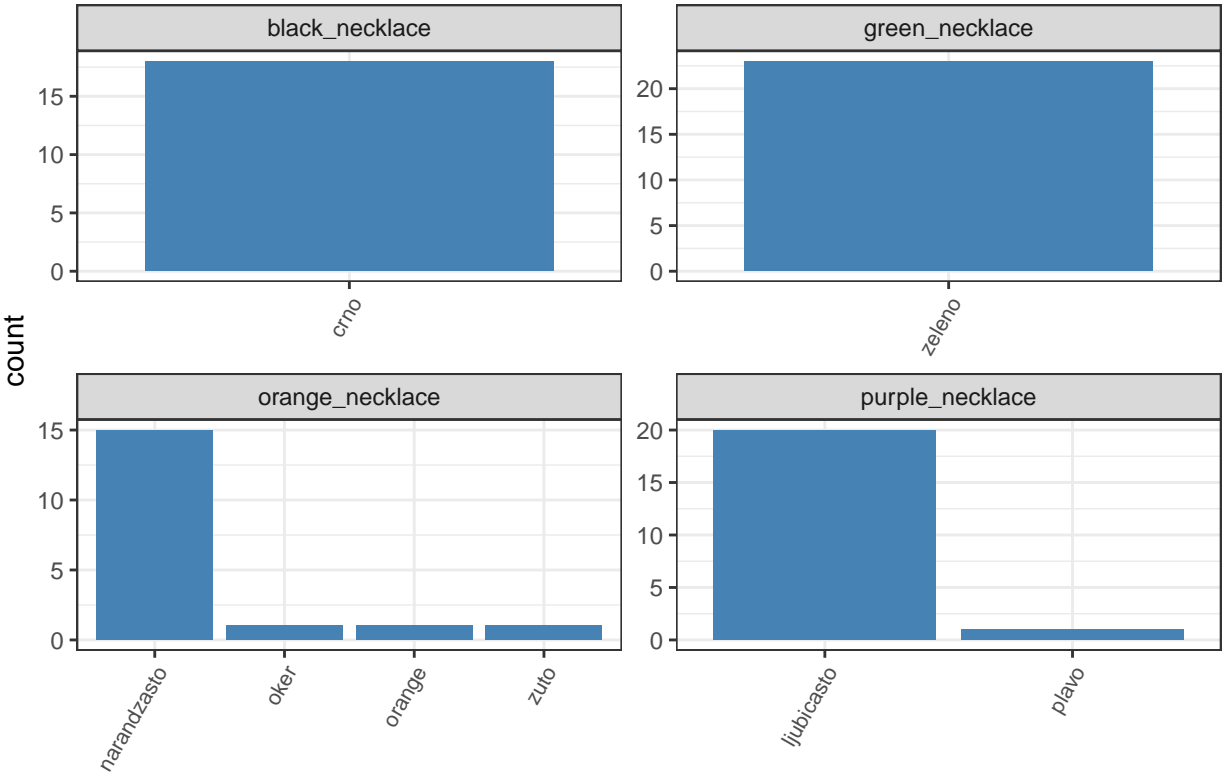

```
## 
## [[65]]
```

notebook
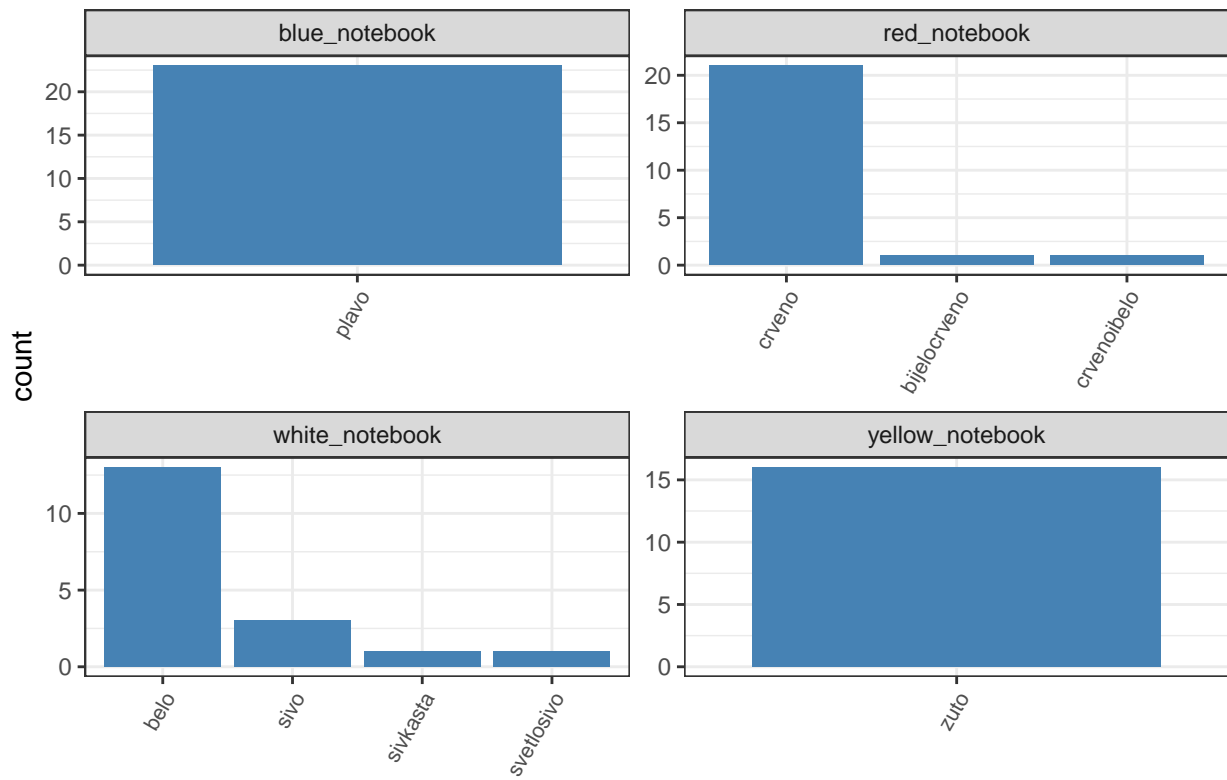

```
## 
## [[66]]
```

ornament
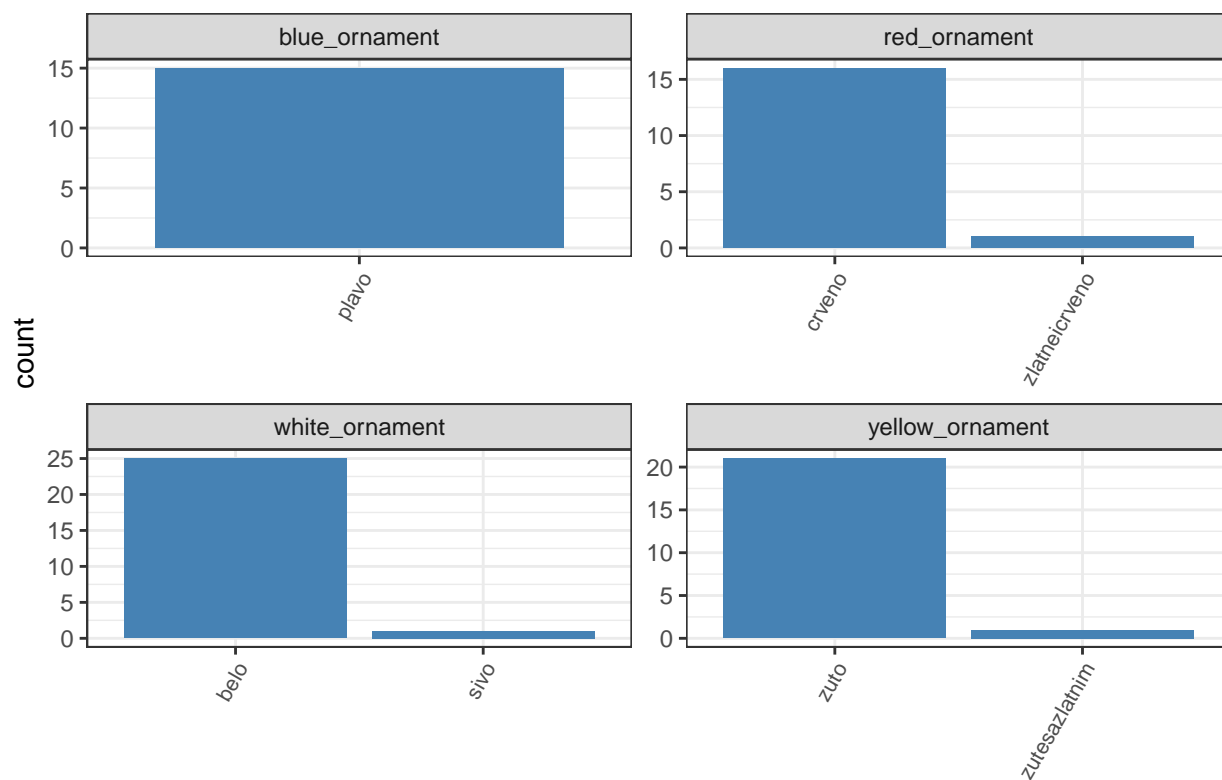

```
##
## [[67]]
```

pencil
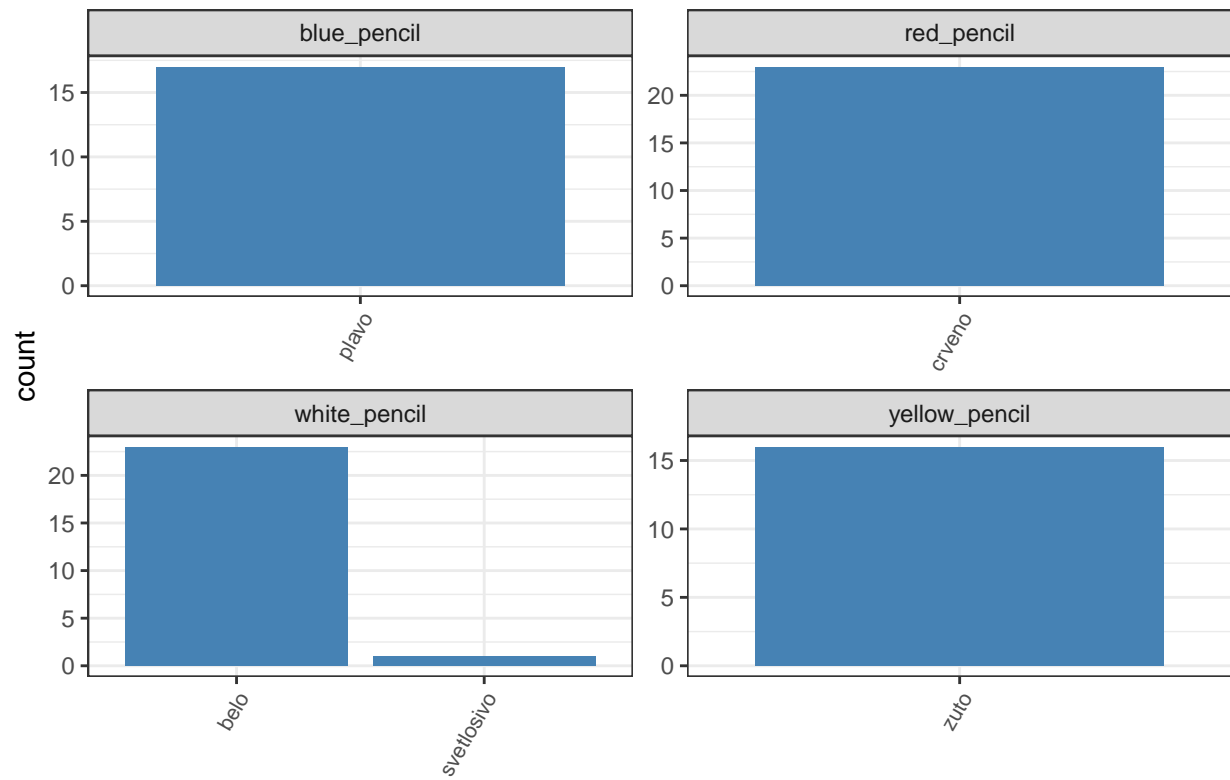

```
## 
## [[68]]
```

phone
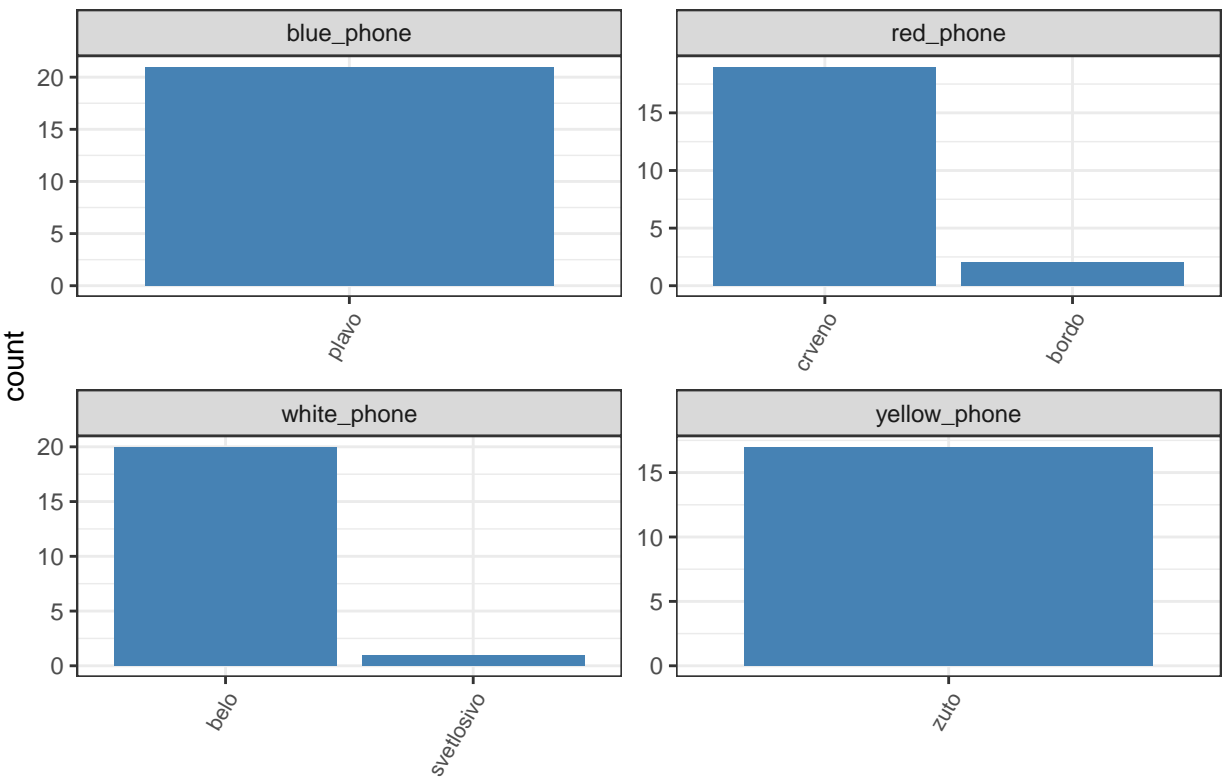

```
## 
## [[69]]
```

piano
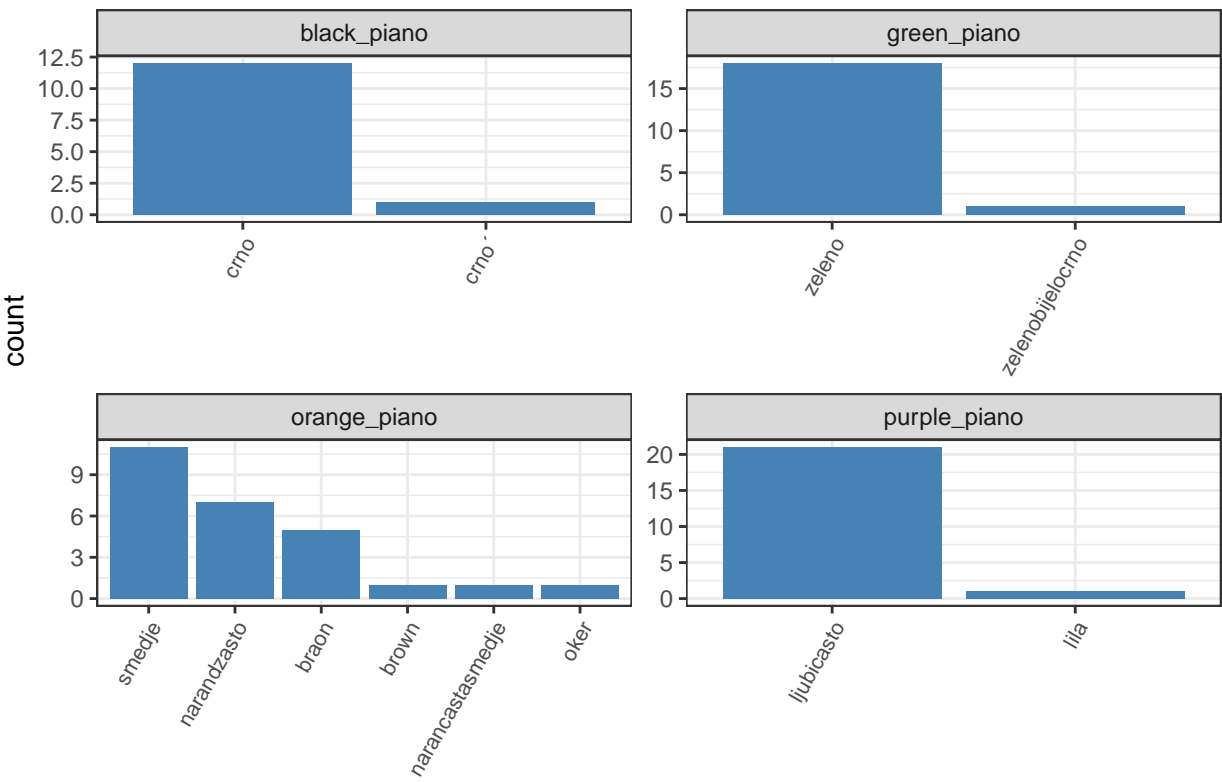

```
## 
## [[70]]
```

plate
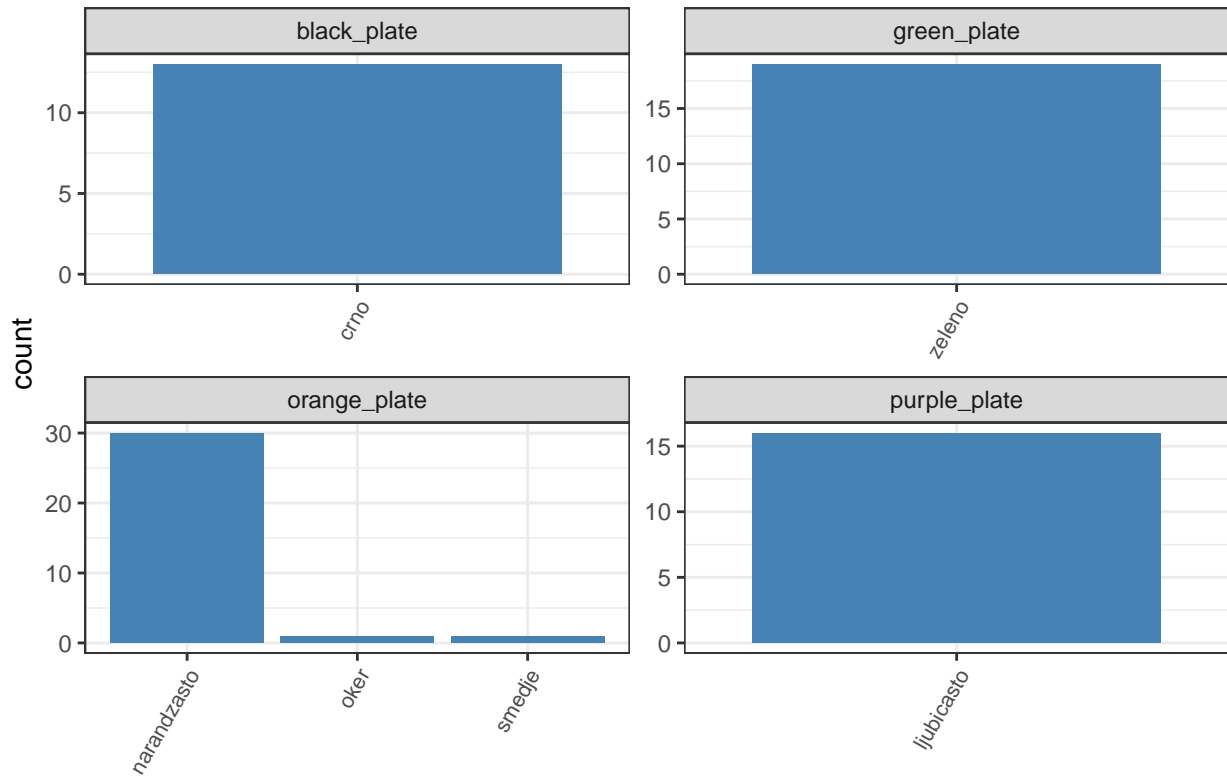

```
## 
## [[71]]
```

present
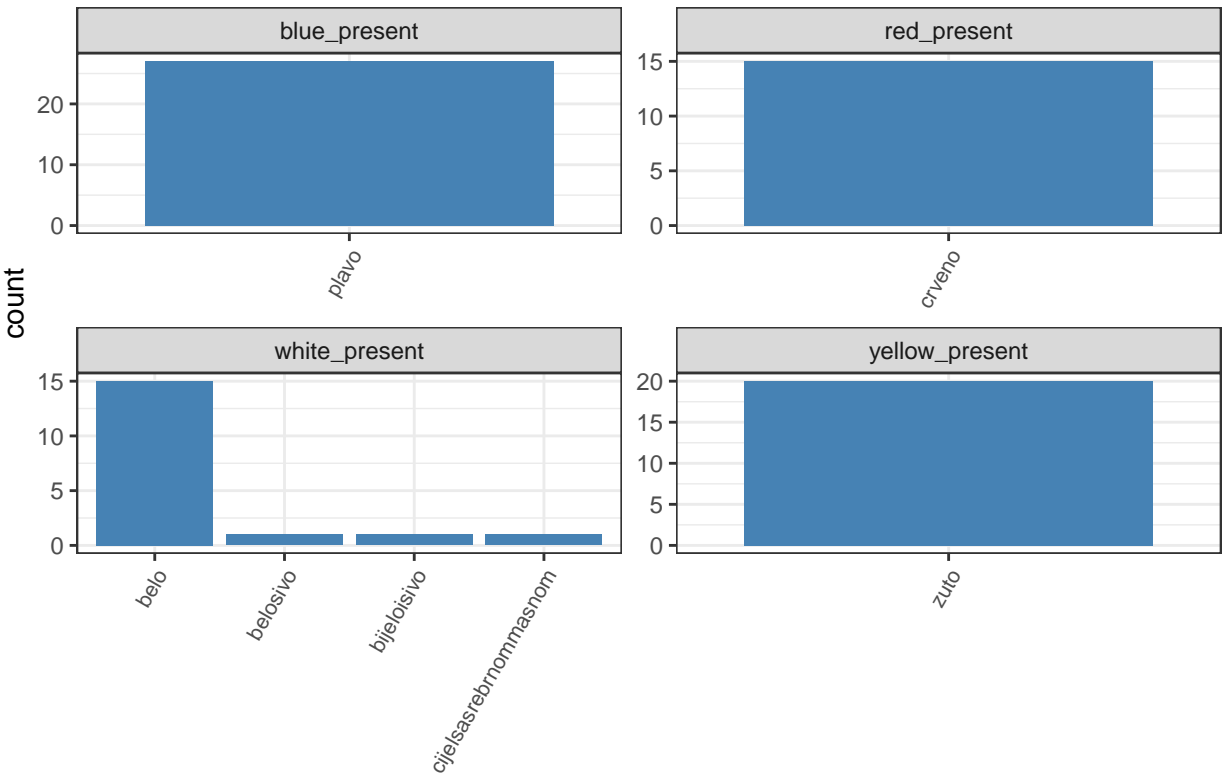

```
##
## [[72]]
```

purse
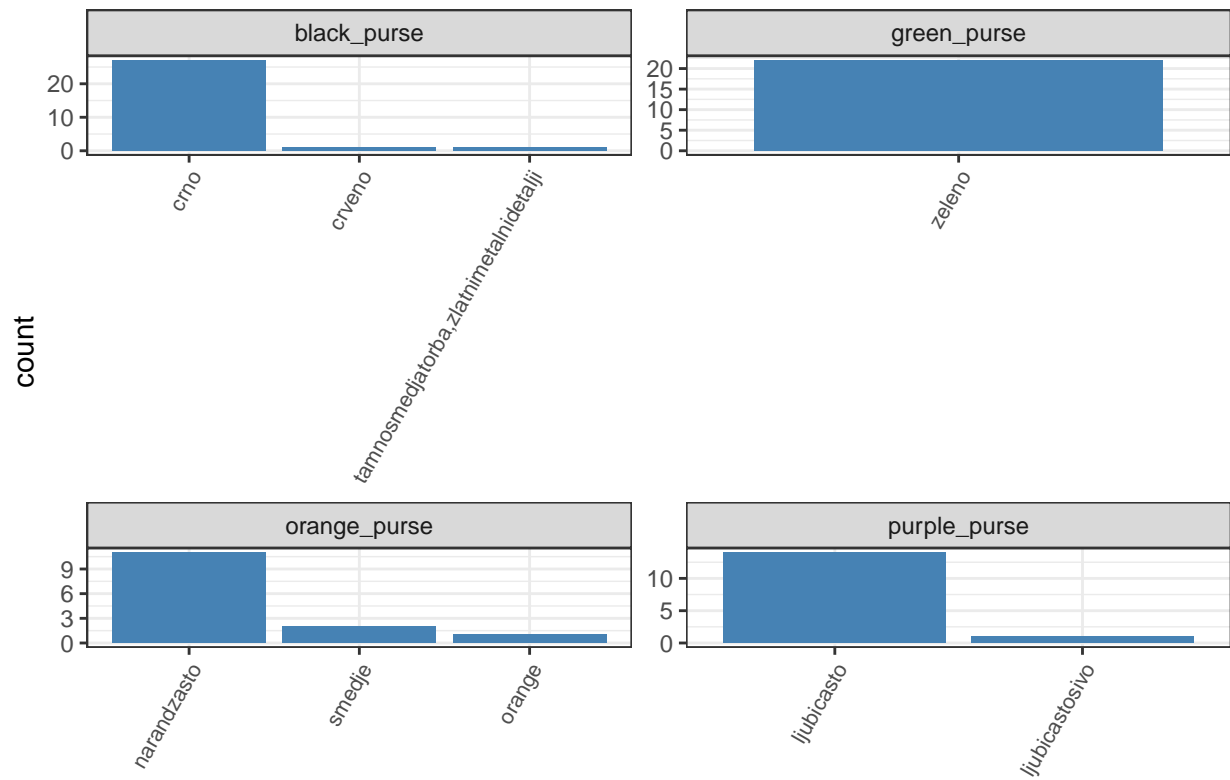

```
## 
## [[73]]
```

radio
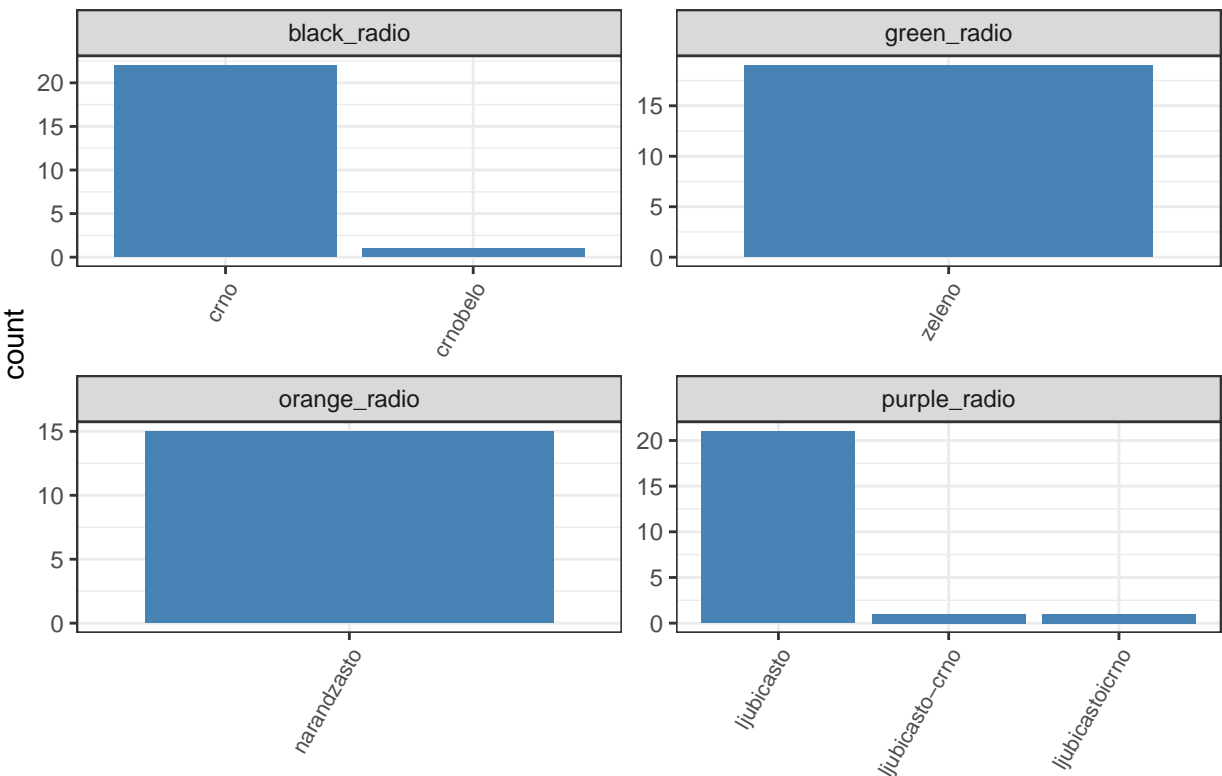

```
## 
## [[74]]
```

razor
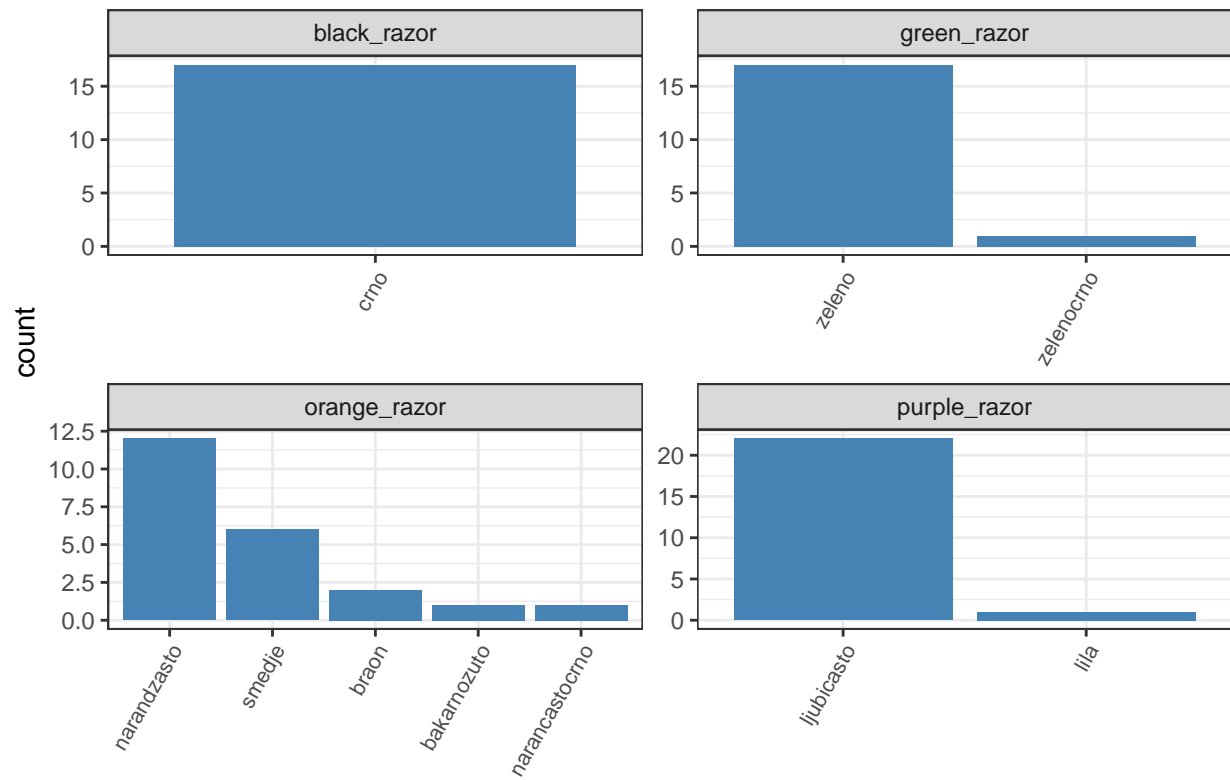

```
## 
## [[75]]
```

remote
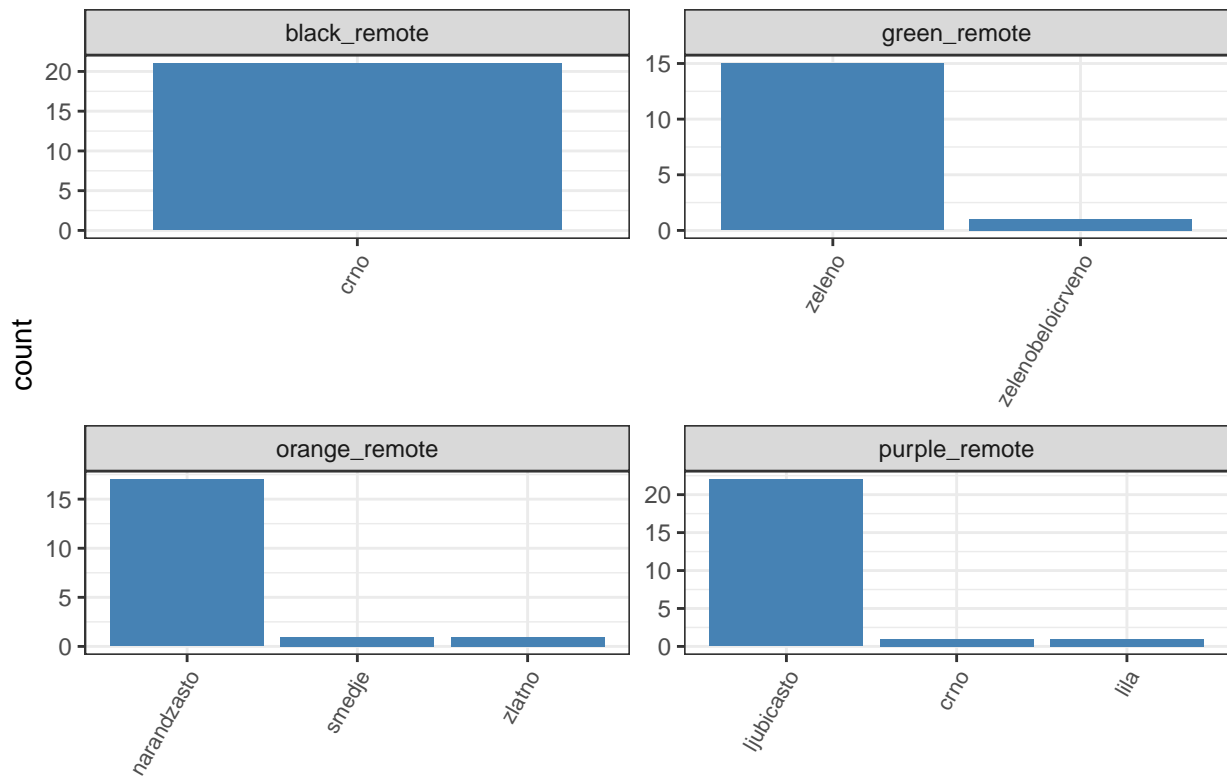

```
## 
## [[76]]
```

ribbon
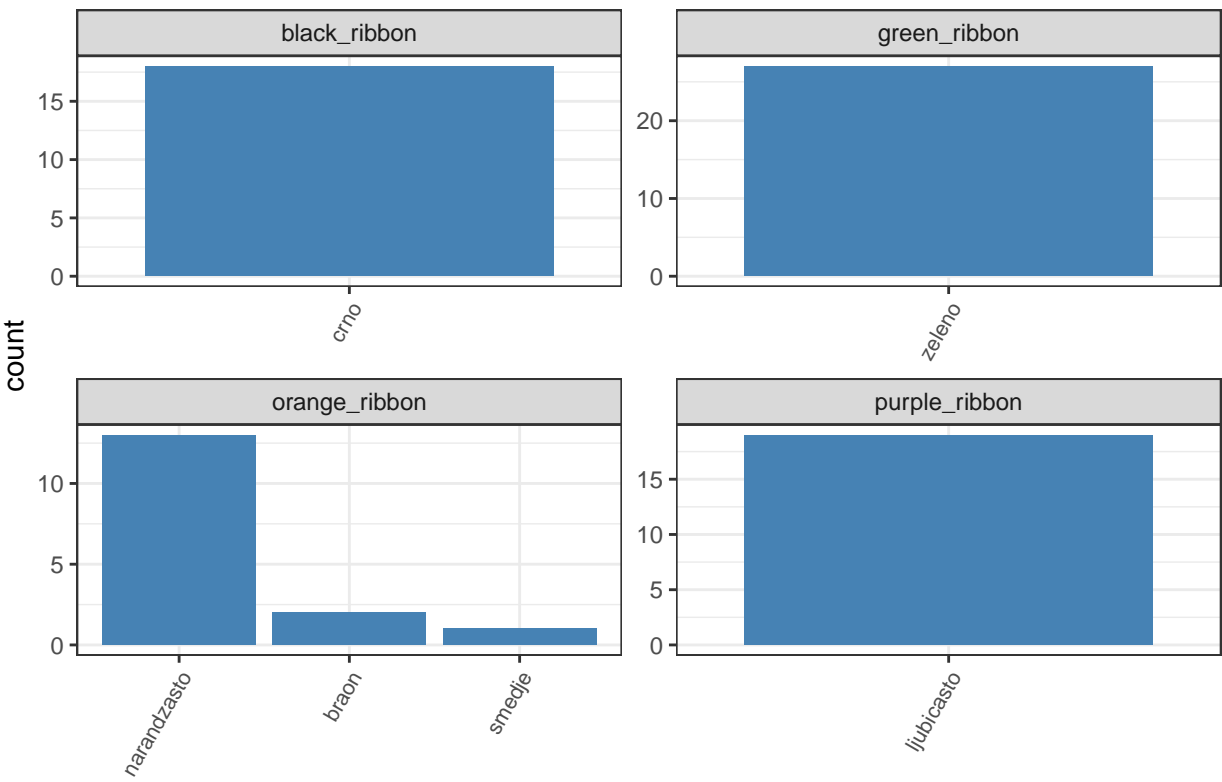

```
## 
## [[77]]
```

ring
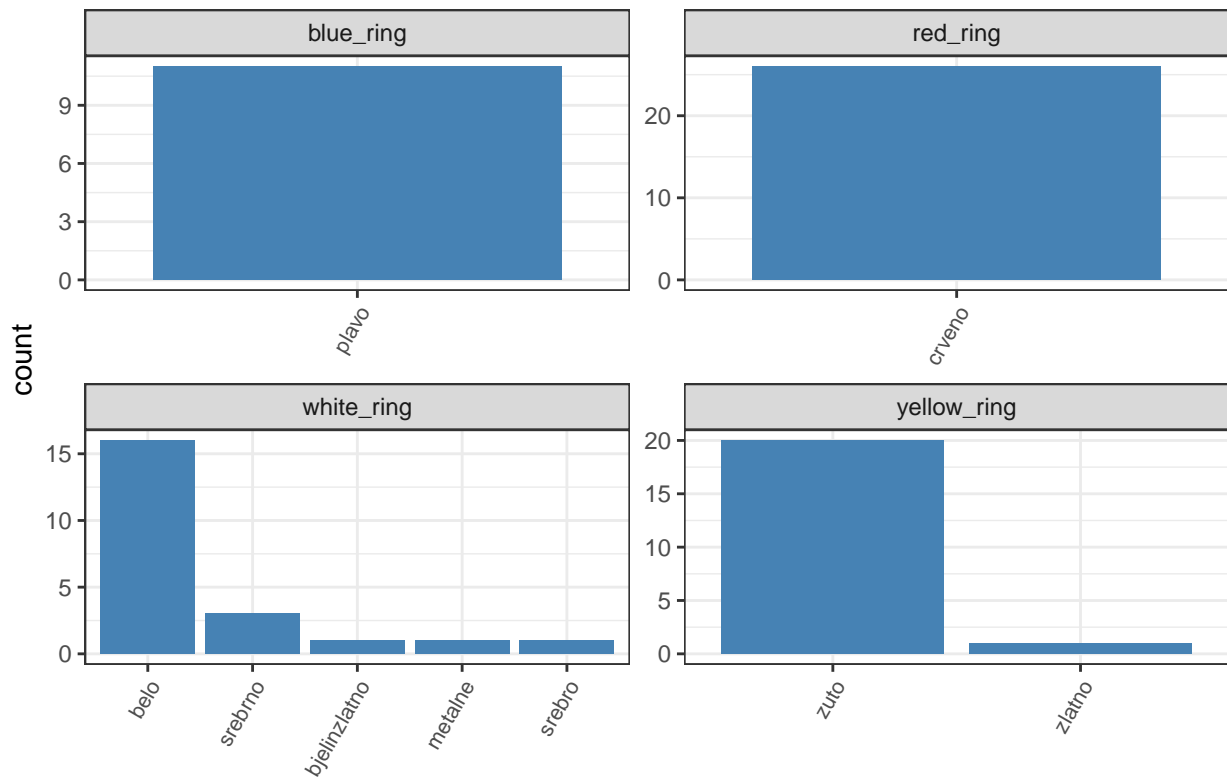

```
##
## [[78]]
```

robot
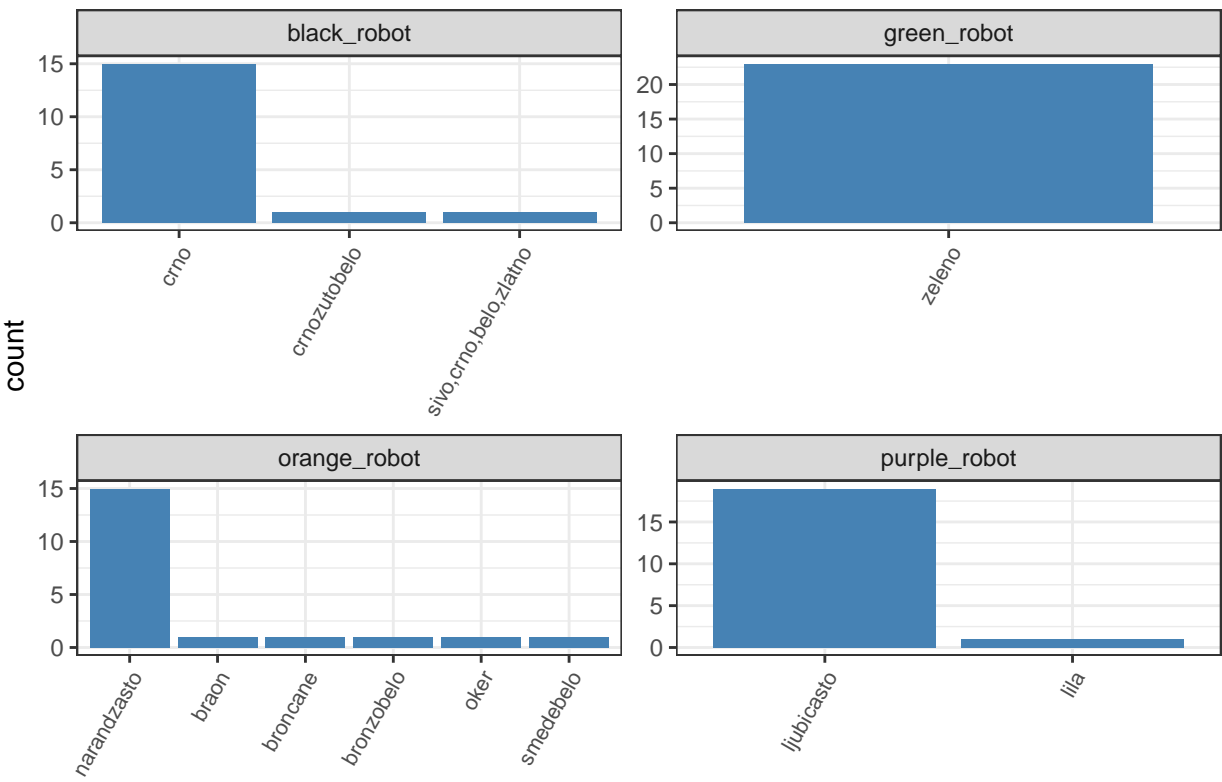

```
## 
## [[79]]
```

rope
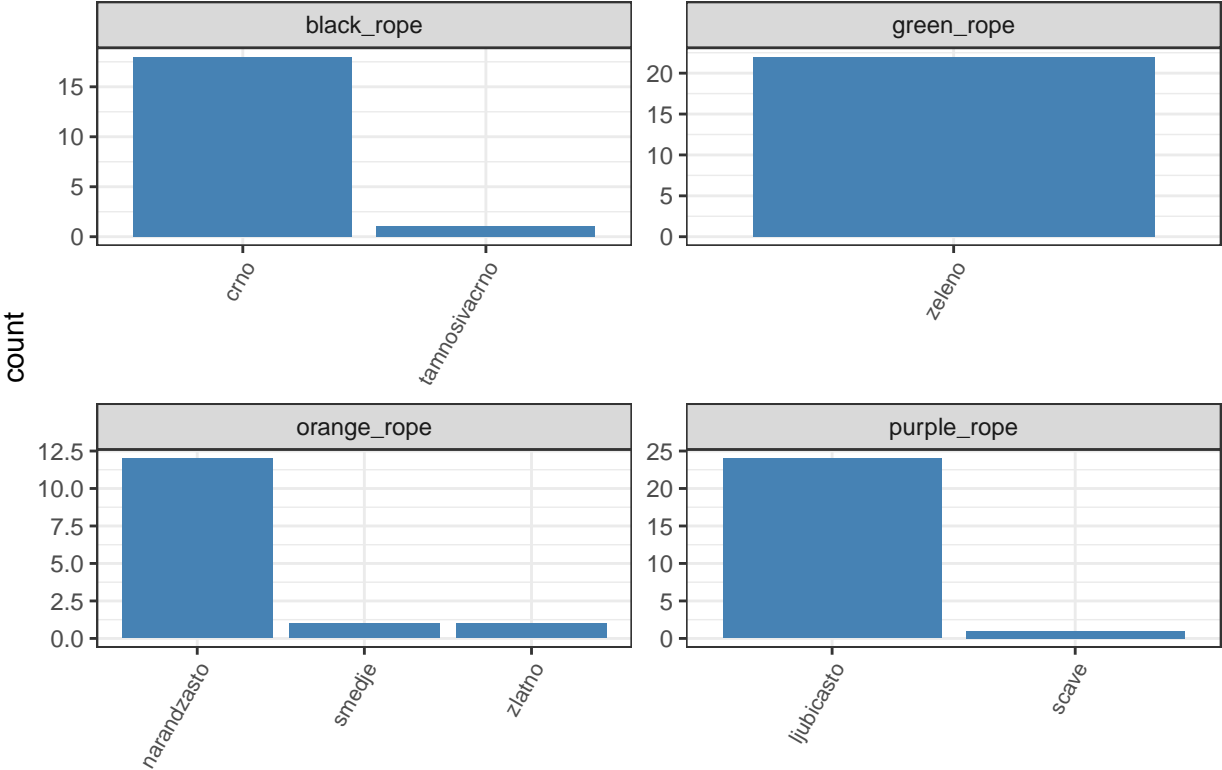

```
## 
## [[80]]
```

rug
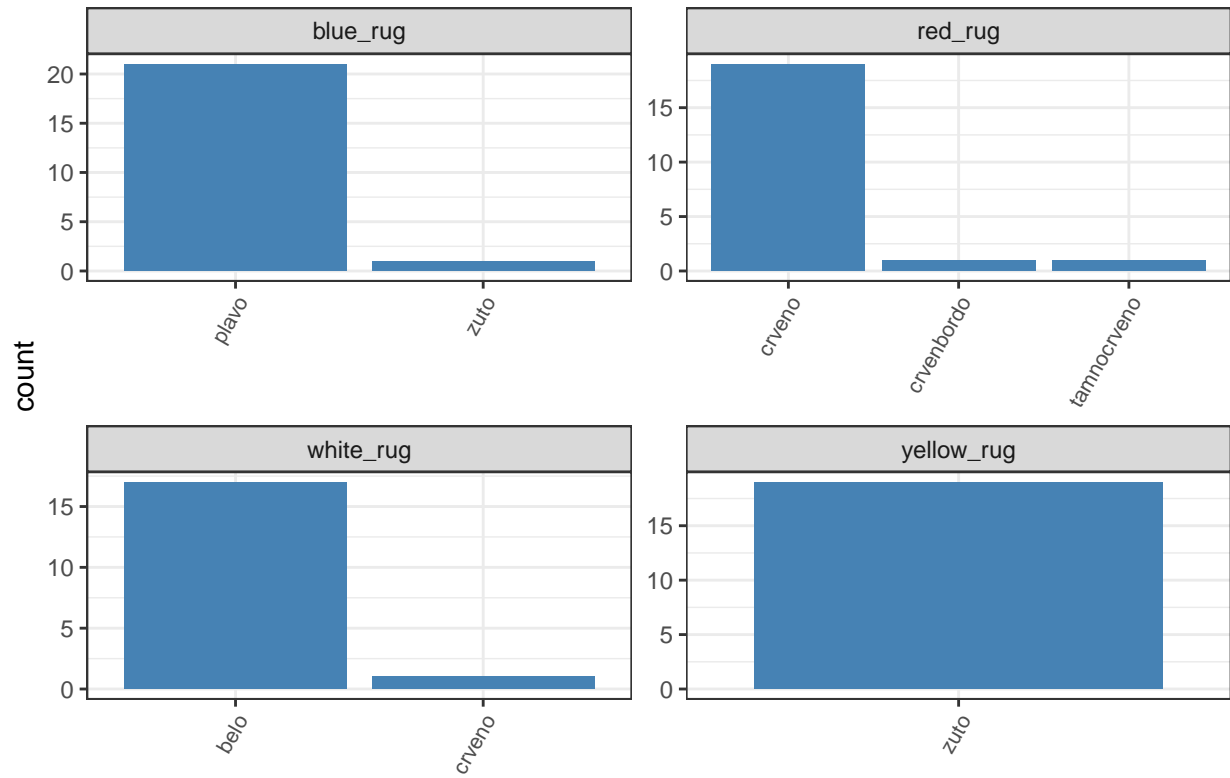

```
## 
## [[81]]
```

ruler
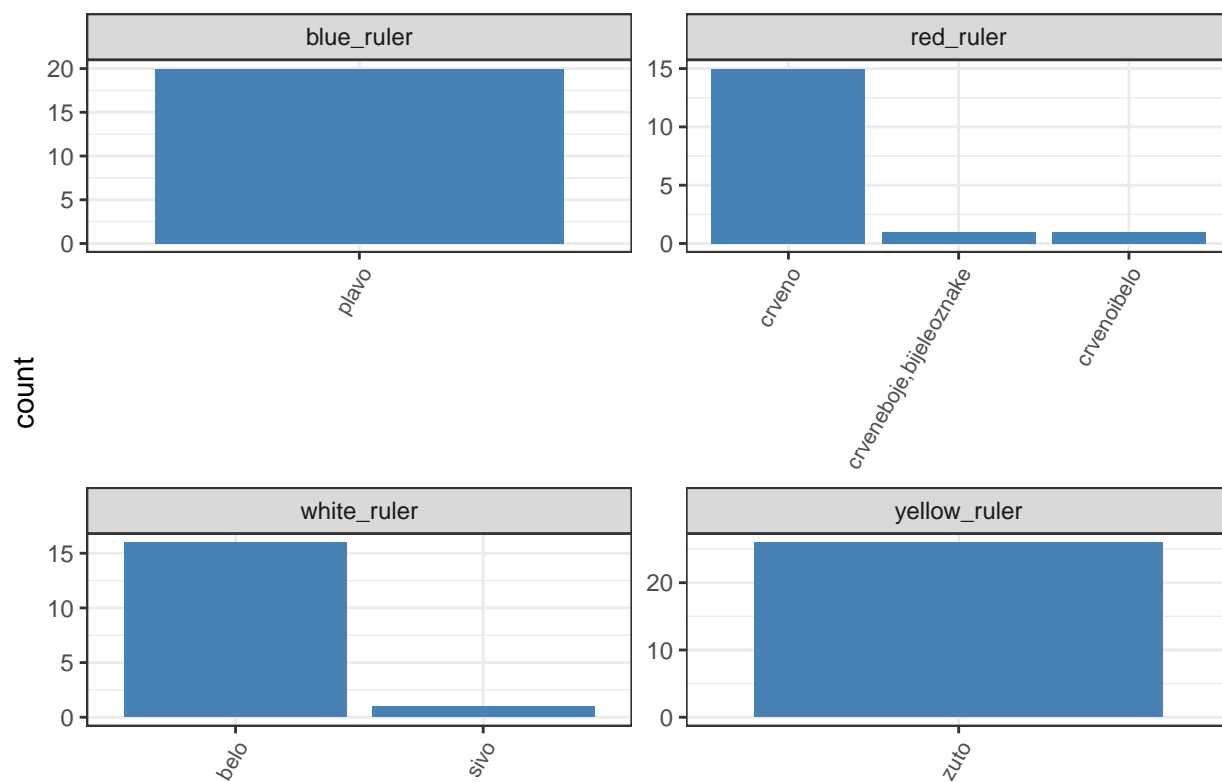

```
## 
## [[82]]
```

scarf
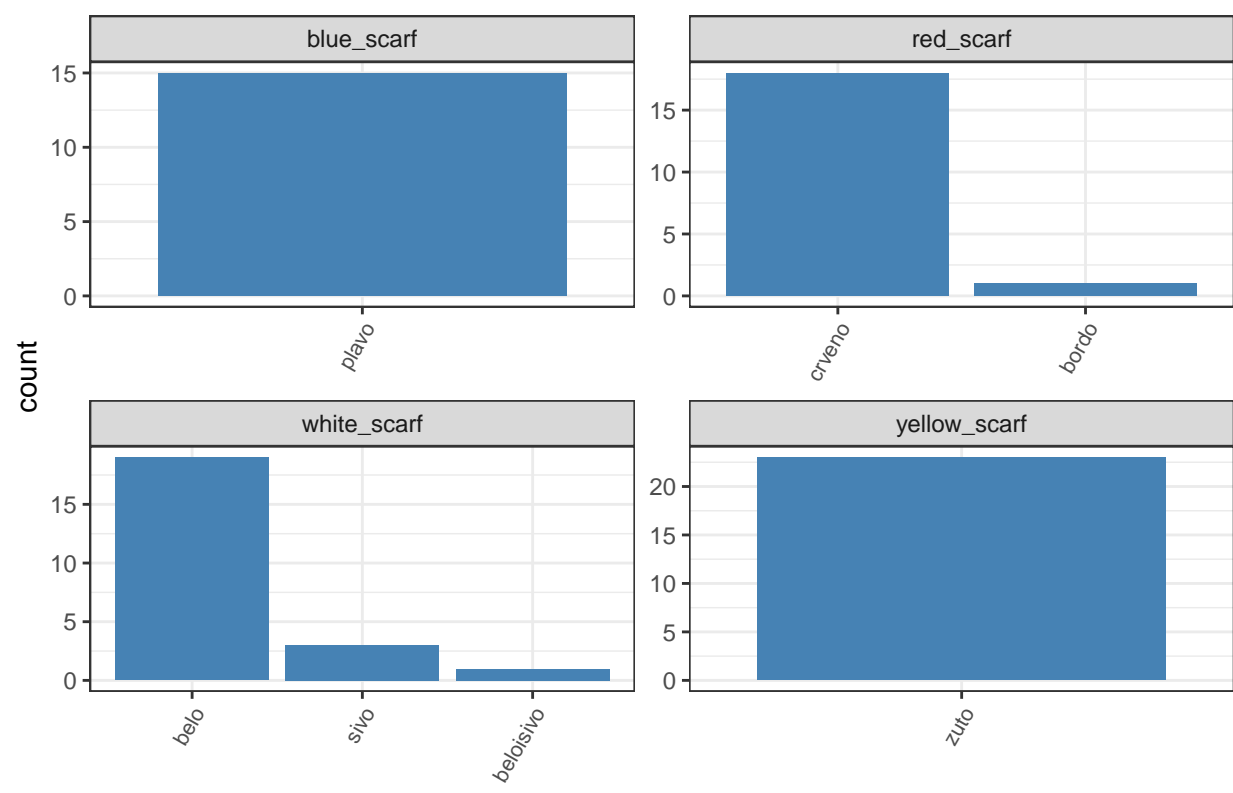

```
##
## [[83]]
```

screwdriver
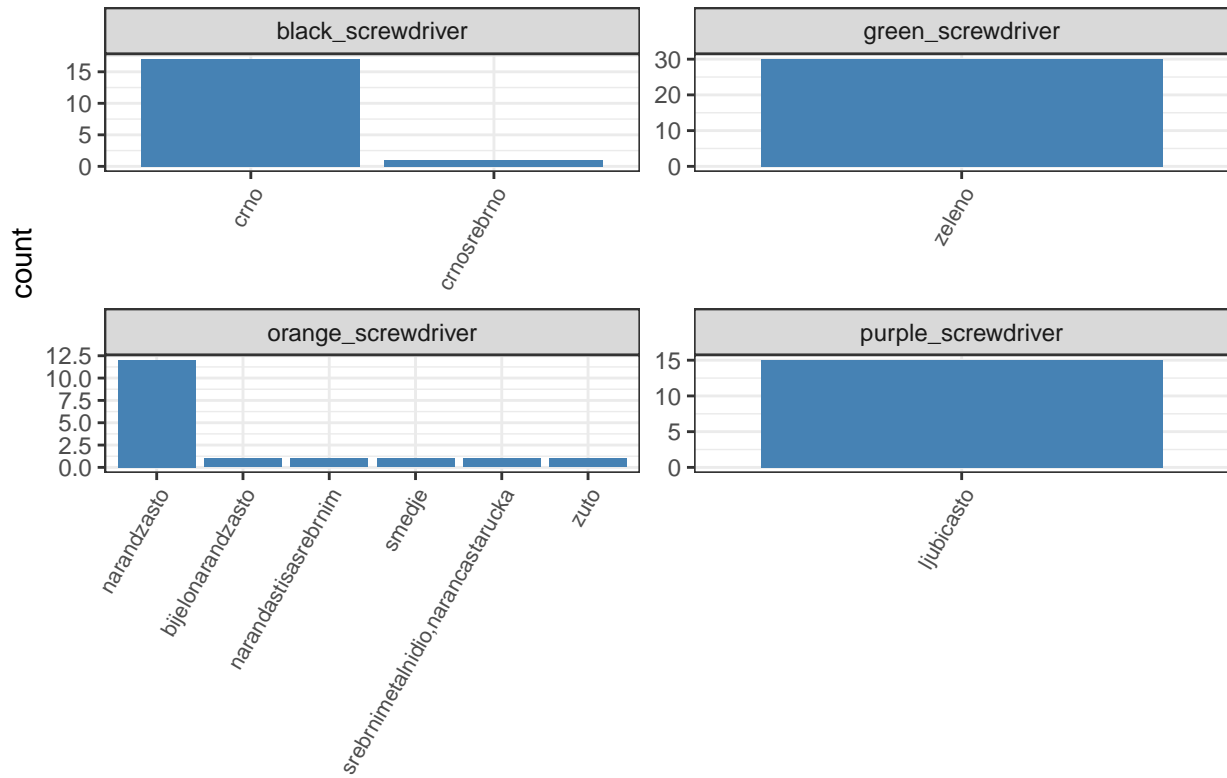

```
## 
## [[84]]
```

shell
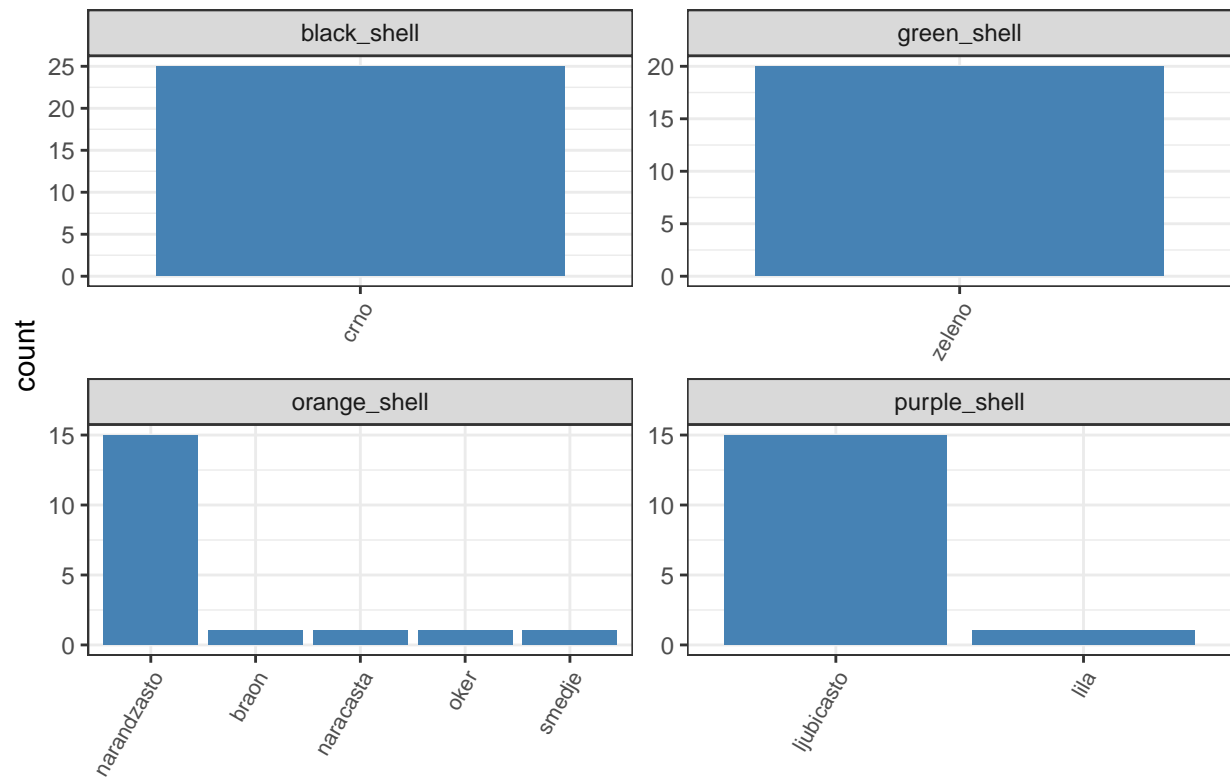

```
## 
## [[85]]
```

shield
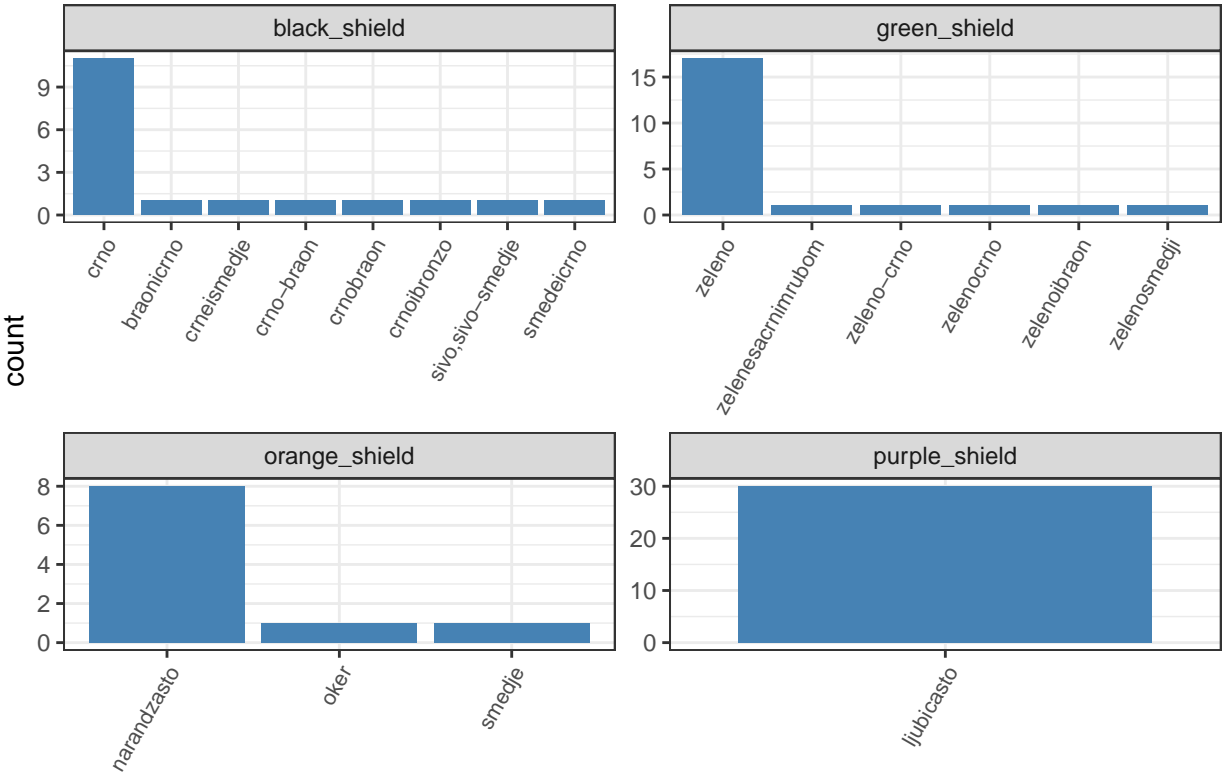

```
##
## [[86]]
```

shirt
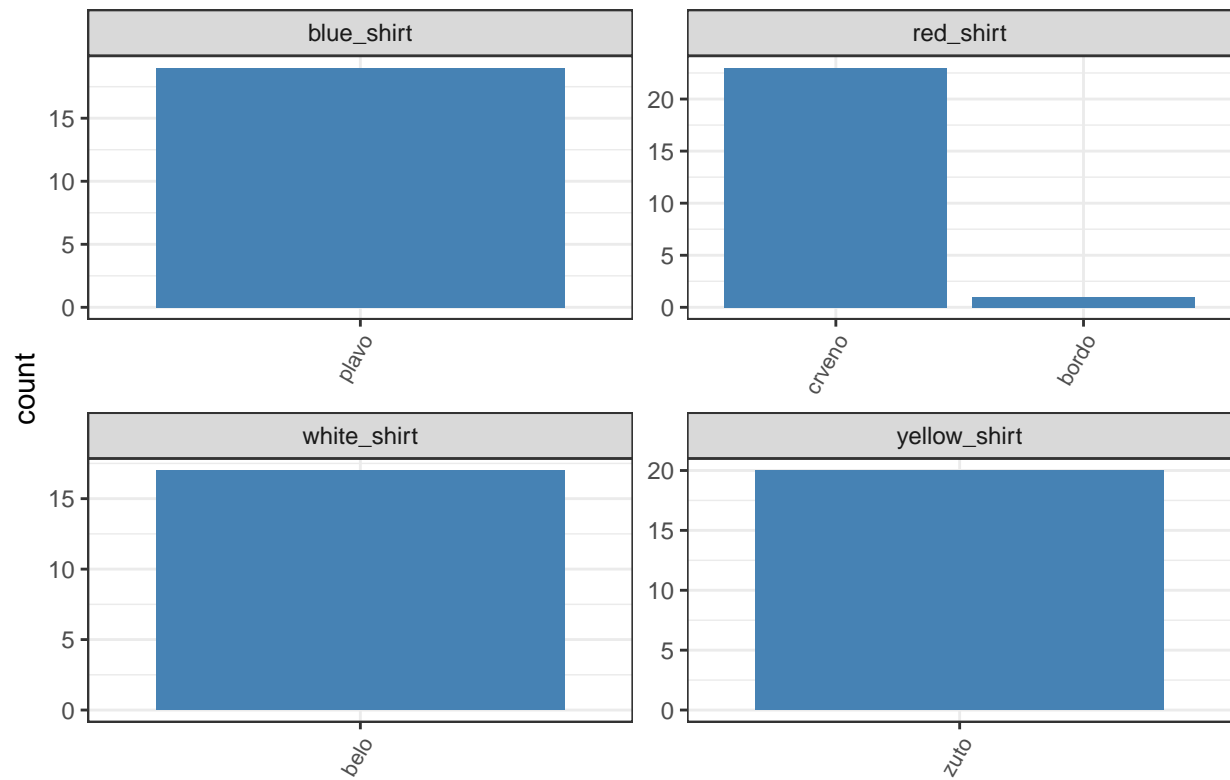
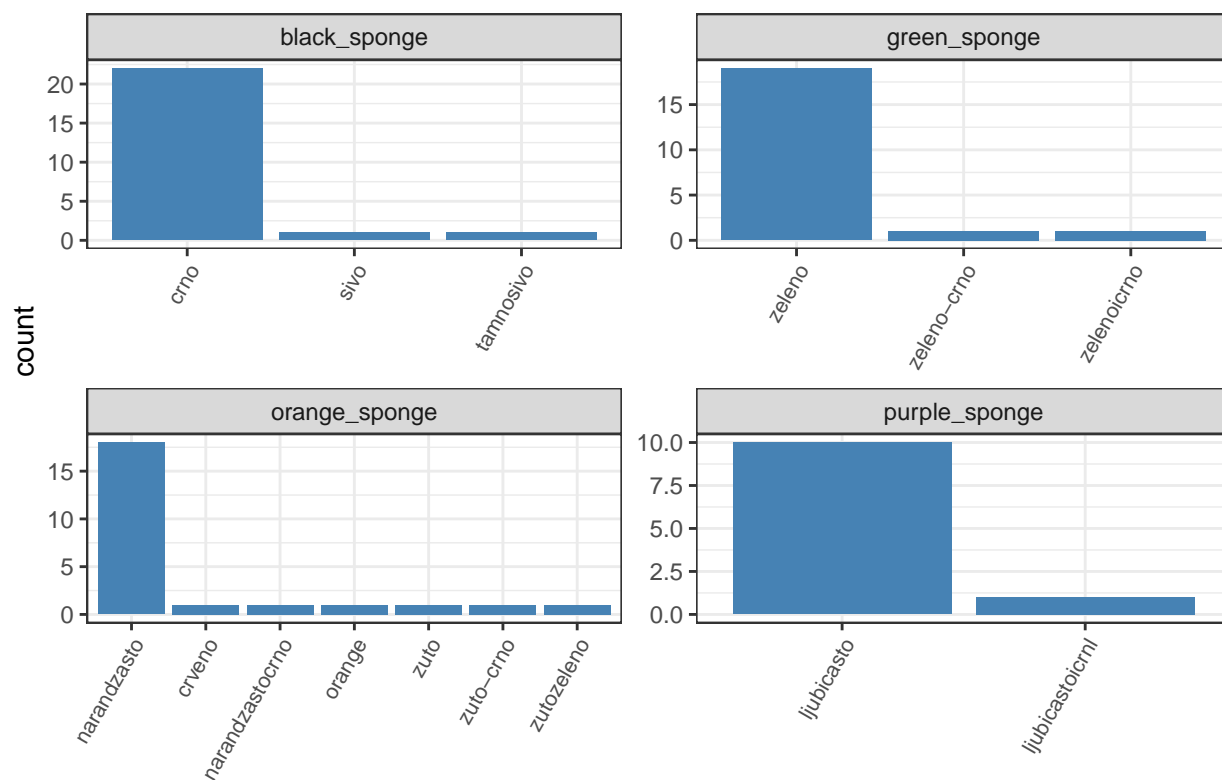

```
## 
## [[87]]
```

shoe
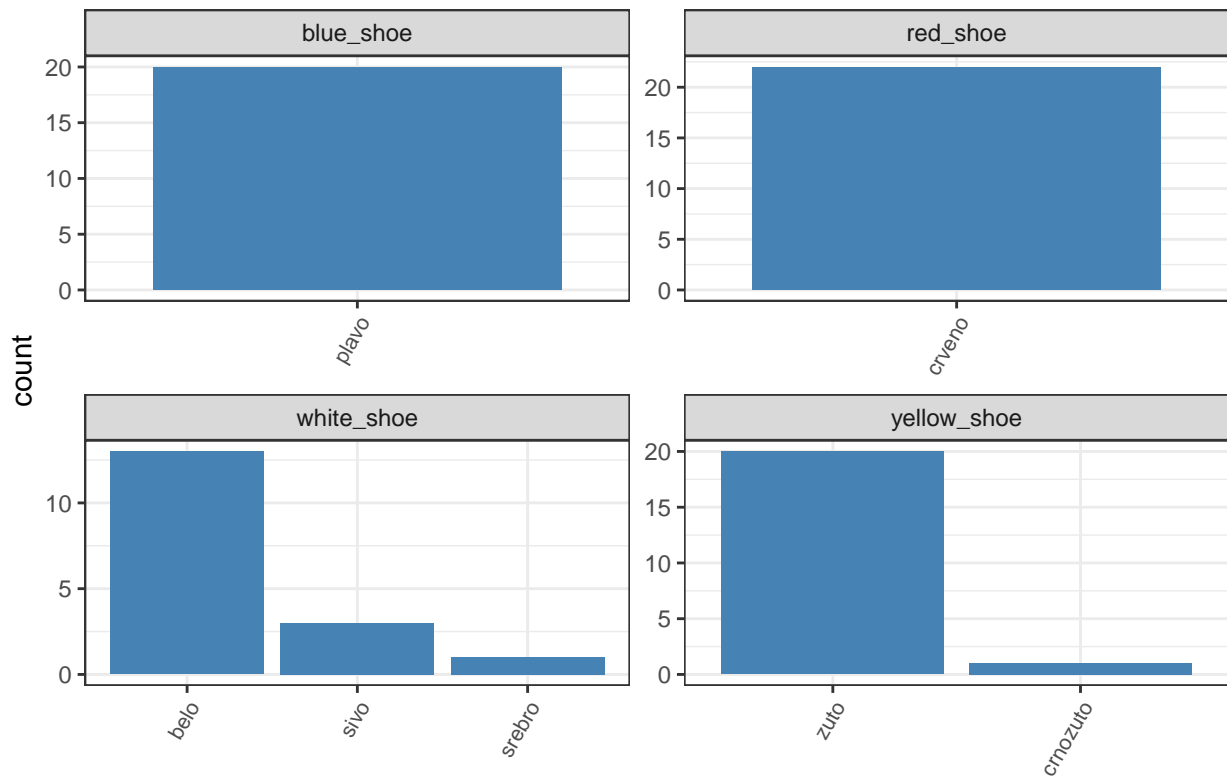

```
## 
## [[88]]
```

shovel
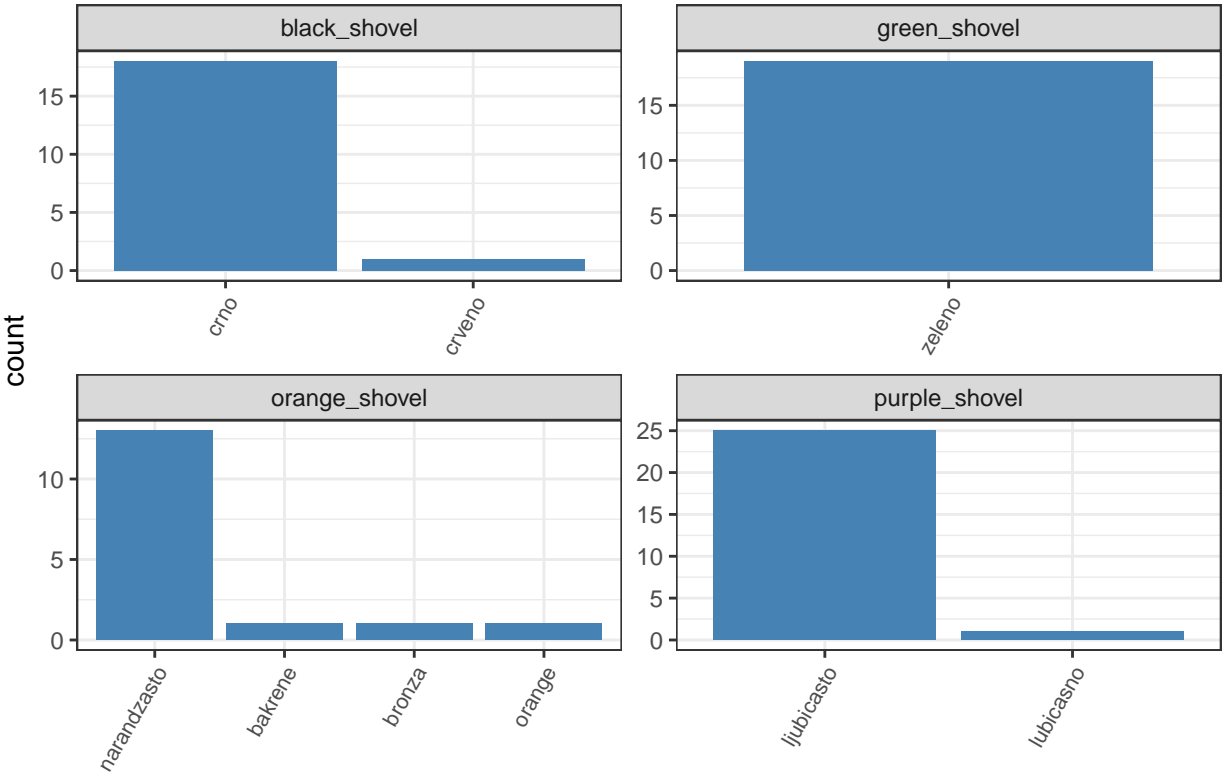

```
## 
## [[89]]
```

slipper
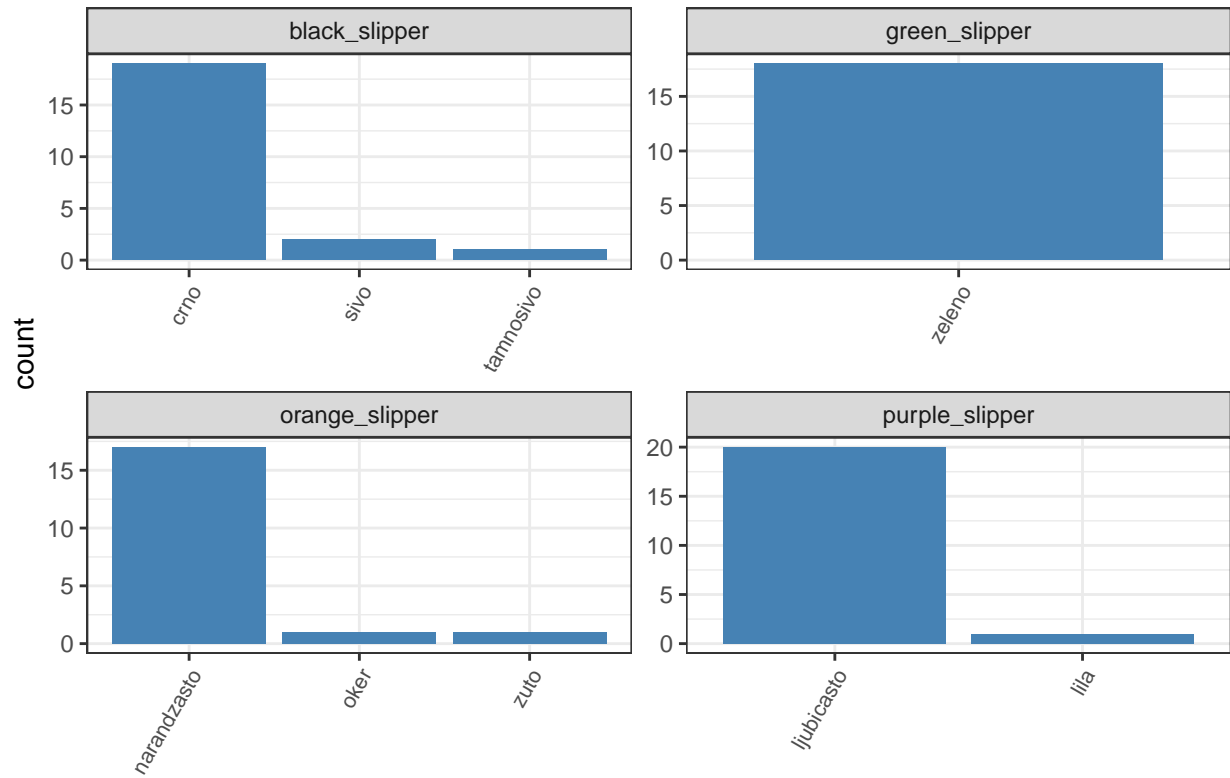

```
## 
## [[90]]
```

sock
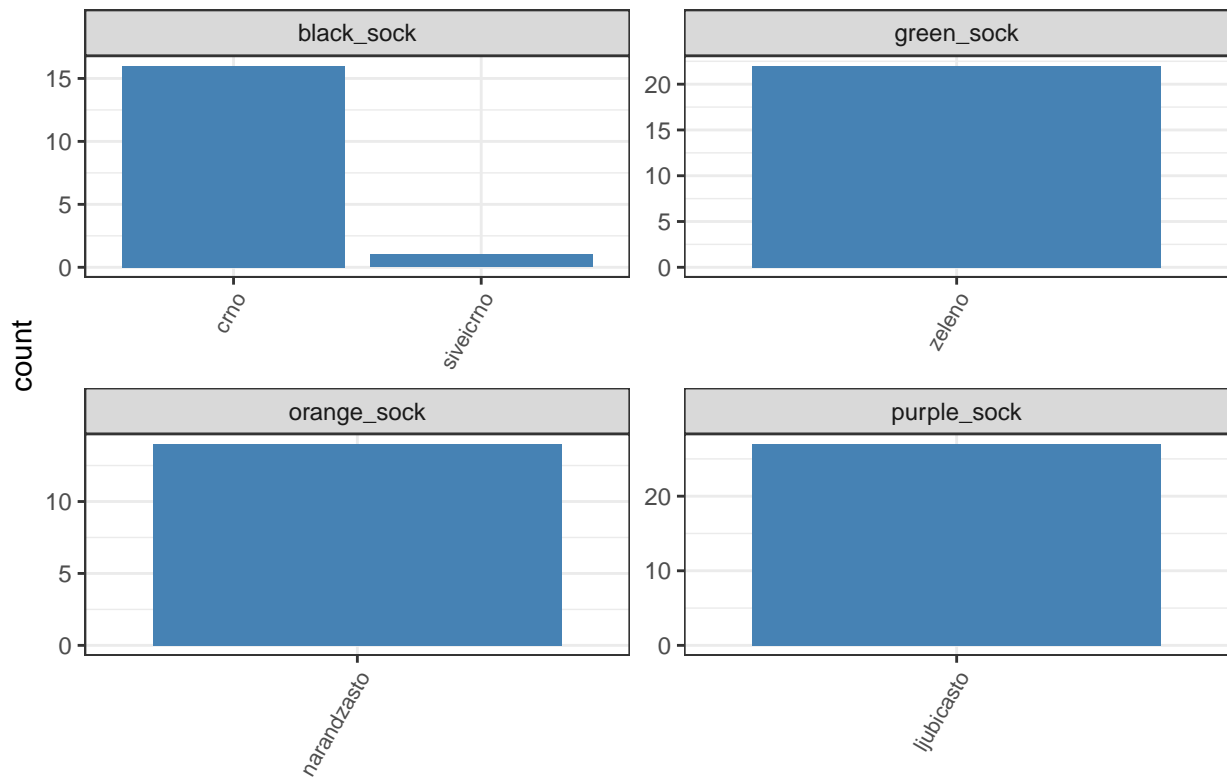

```
##
## [[91]]
```

sponge


```
## 
## [[92]]
```

spoon
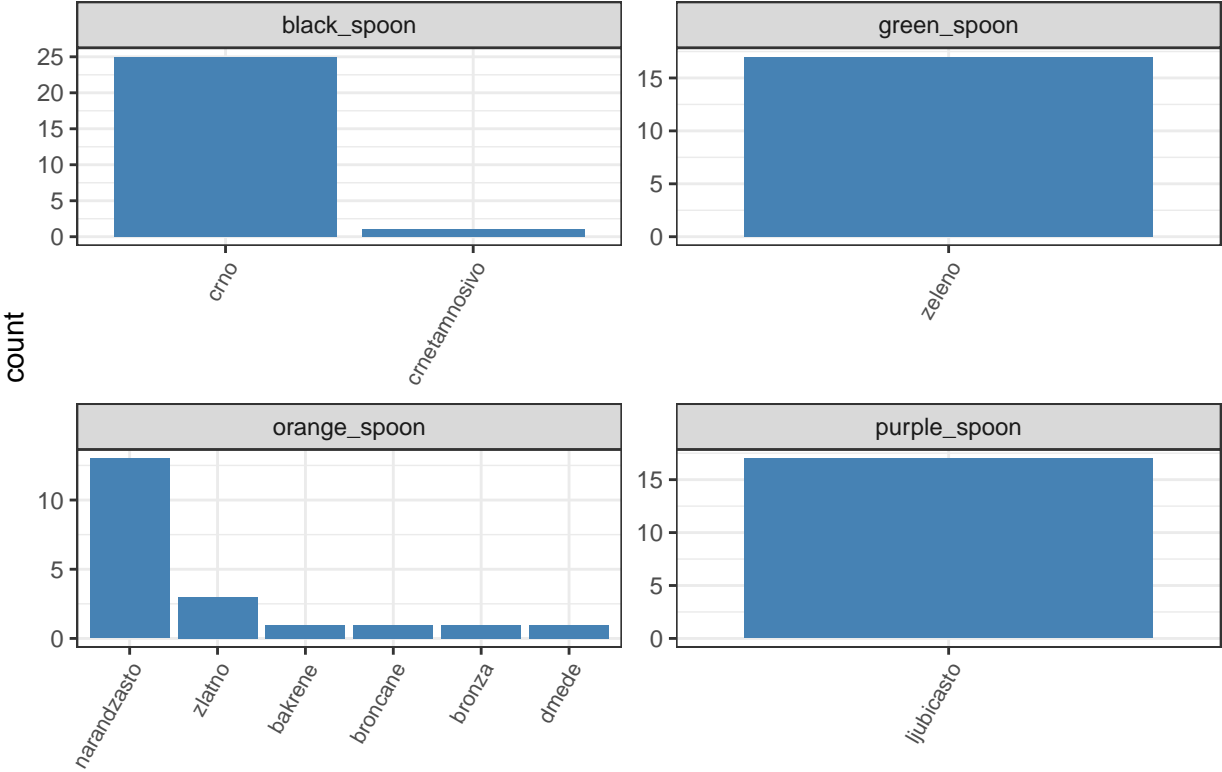

```
## 
## [[93]]
```

stapler
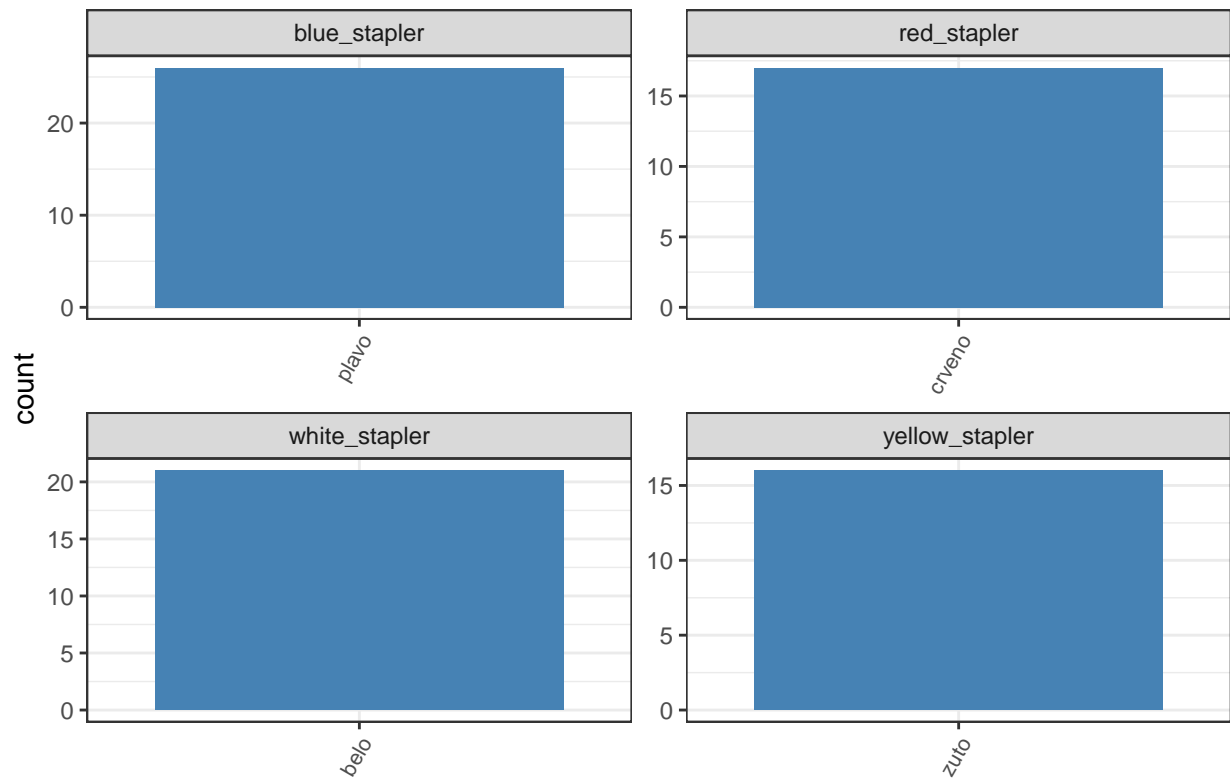

```
##
## [[94]]
```

switch
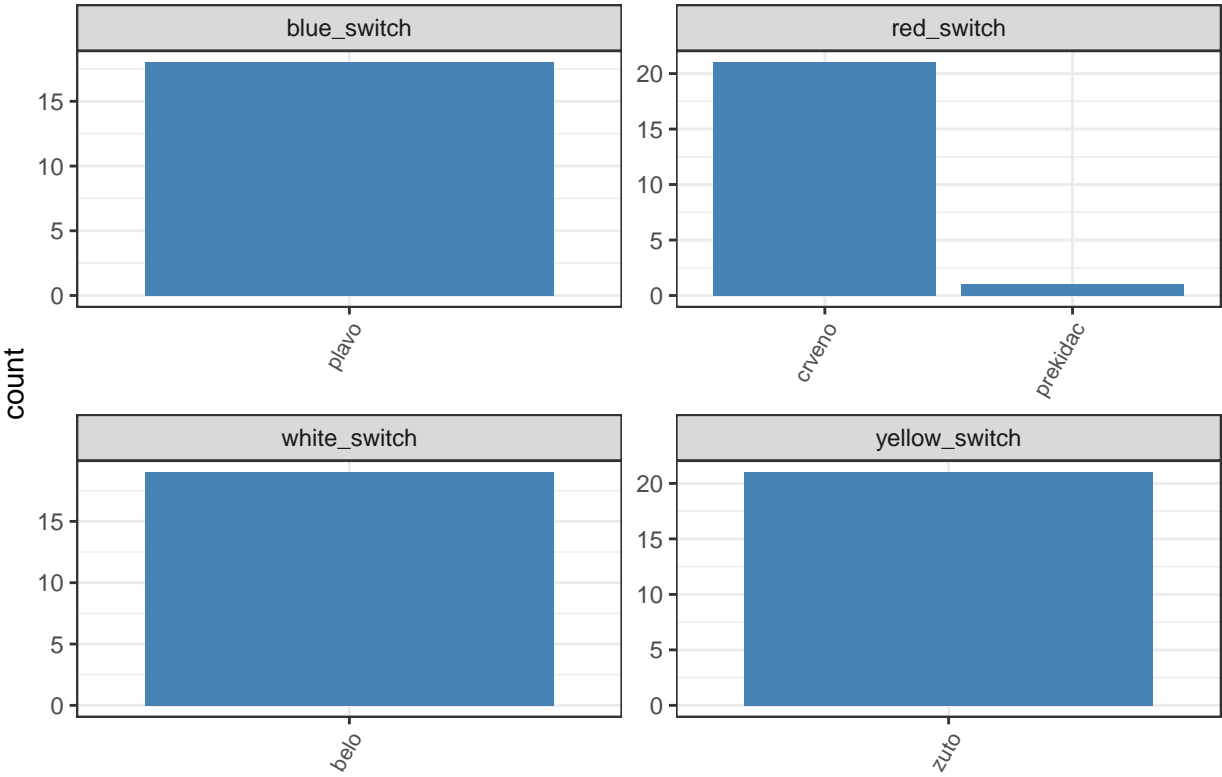

```
## 
## [[95]]
```

sword
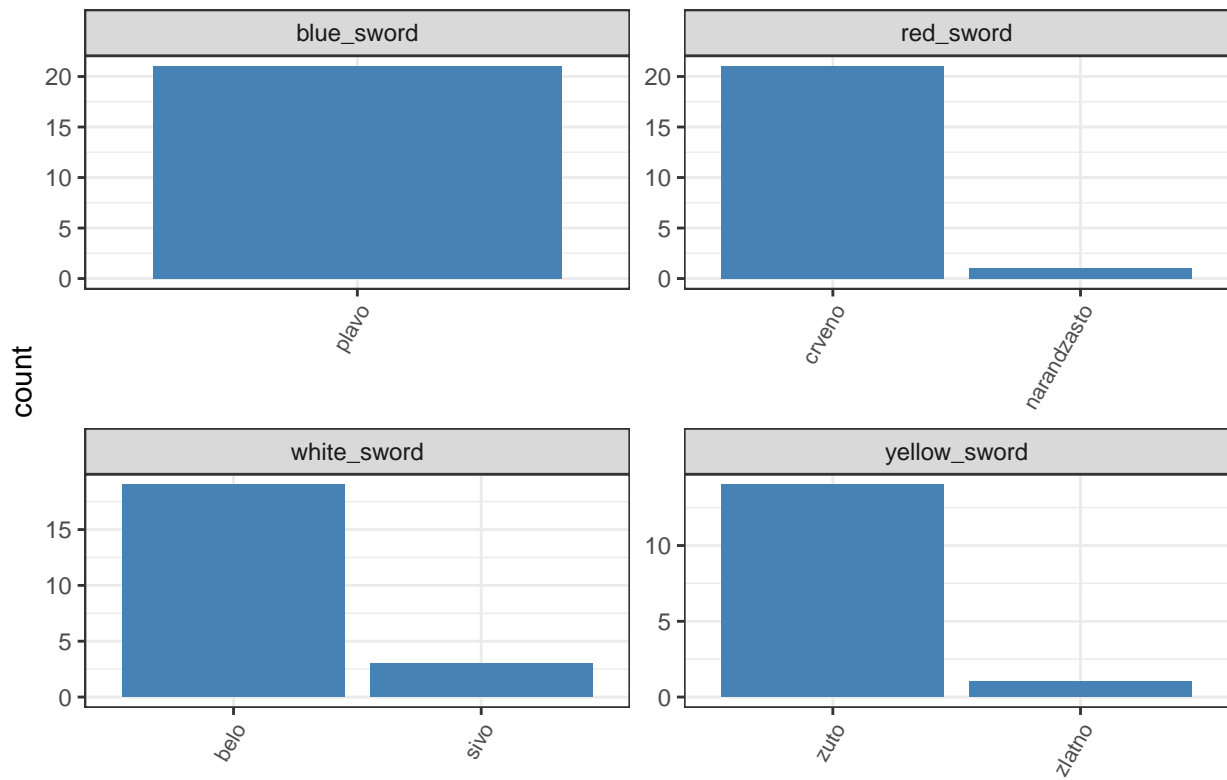

```
## 
## [[96]]
```

table


```
##
## [[97]]
```

tent


```
## 
## [[98]]
```
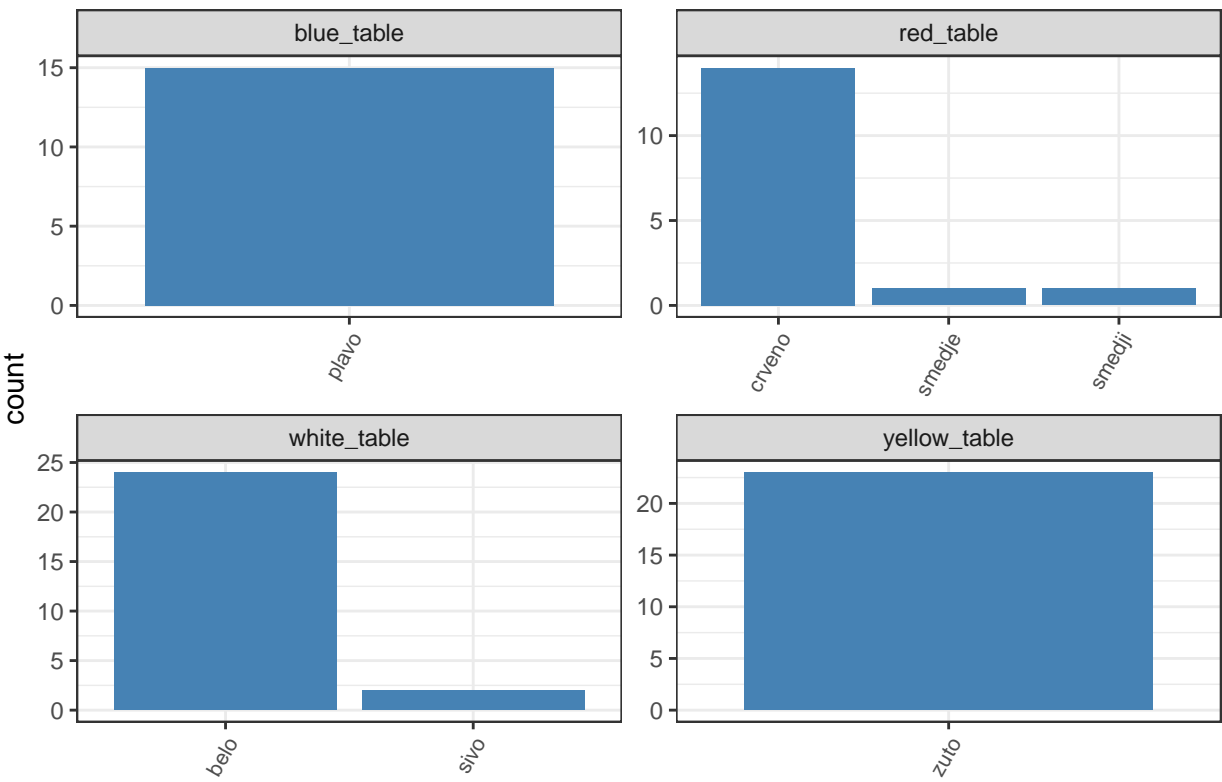
tent
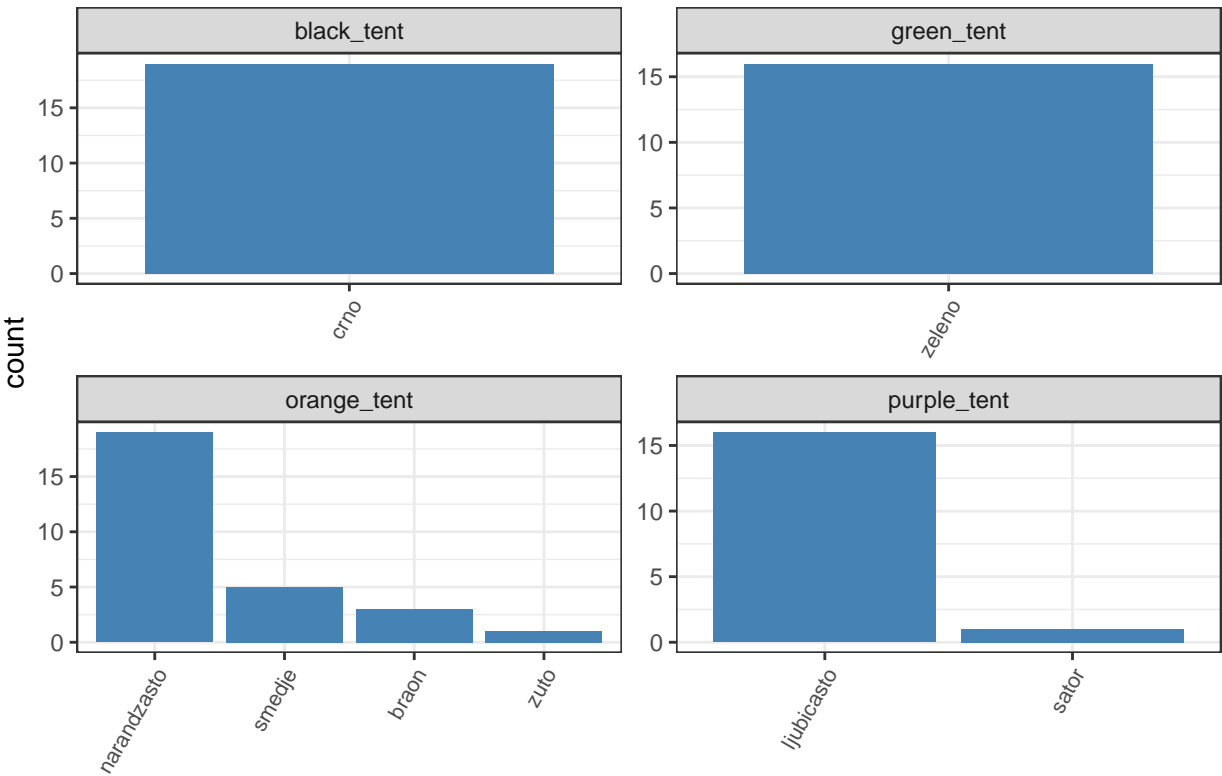

```
## 
## [[98]]
```

tie
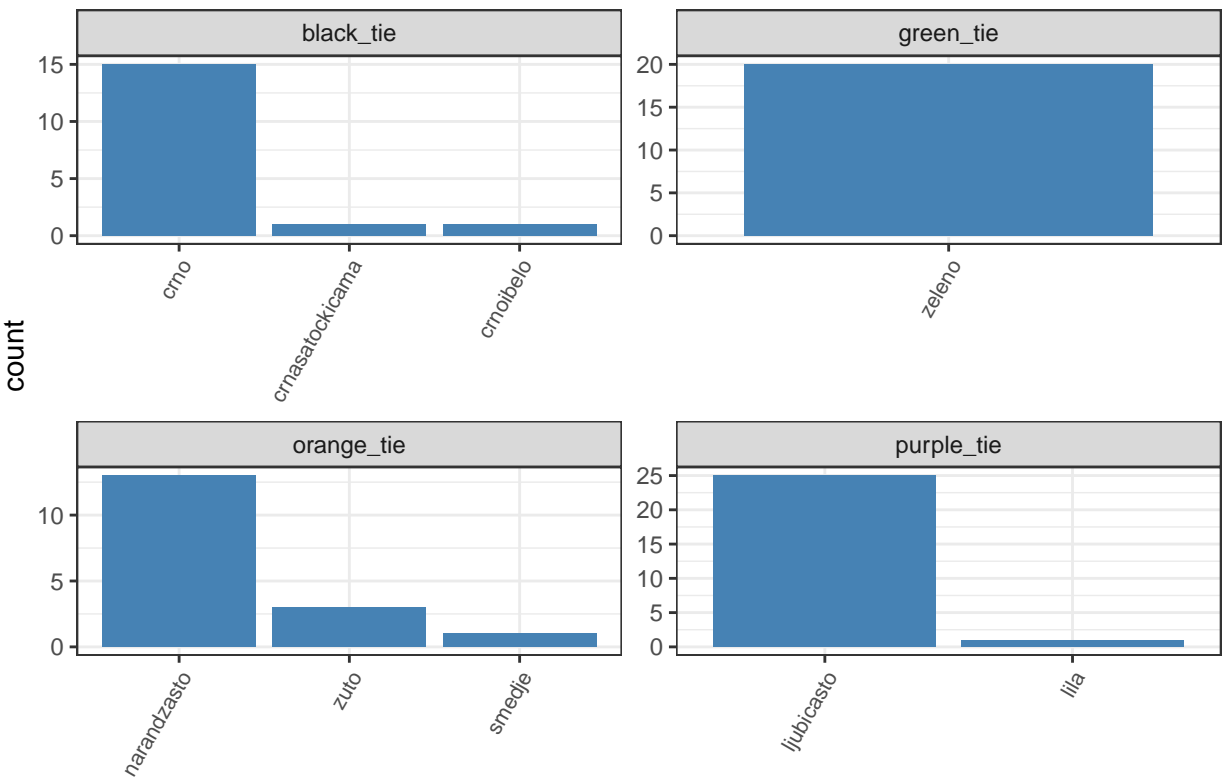

```
## 
## [[99]]
```

truck
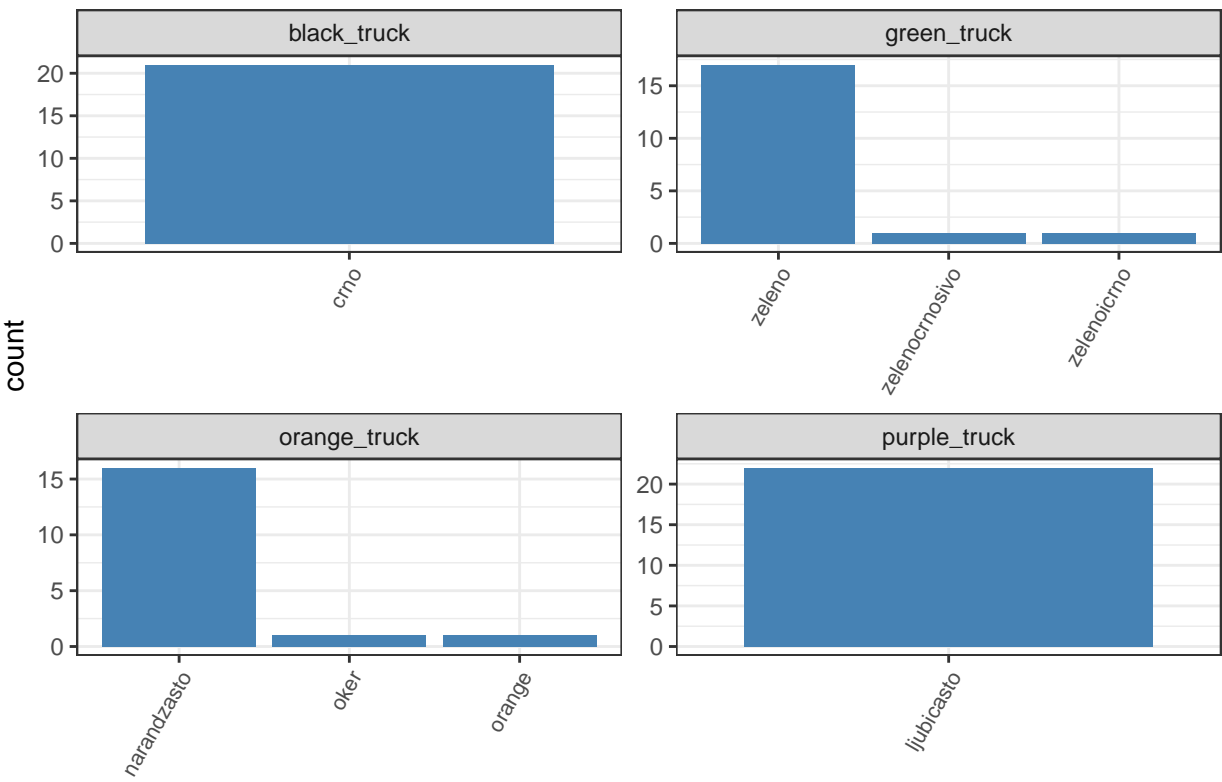

```
## 
## [[100]]
```

tv
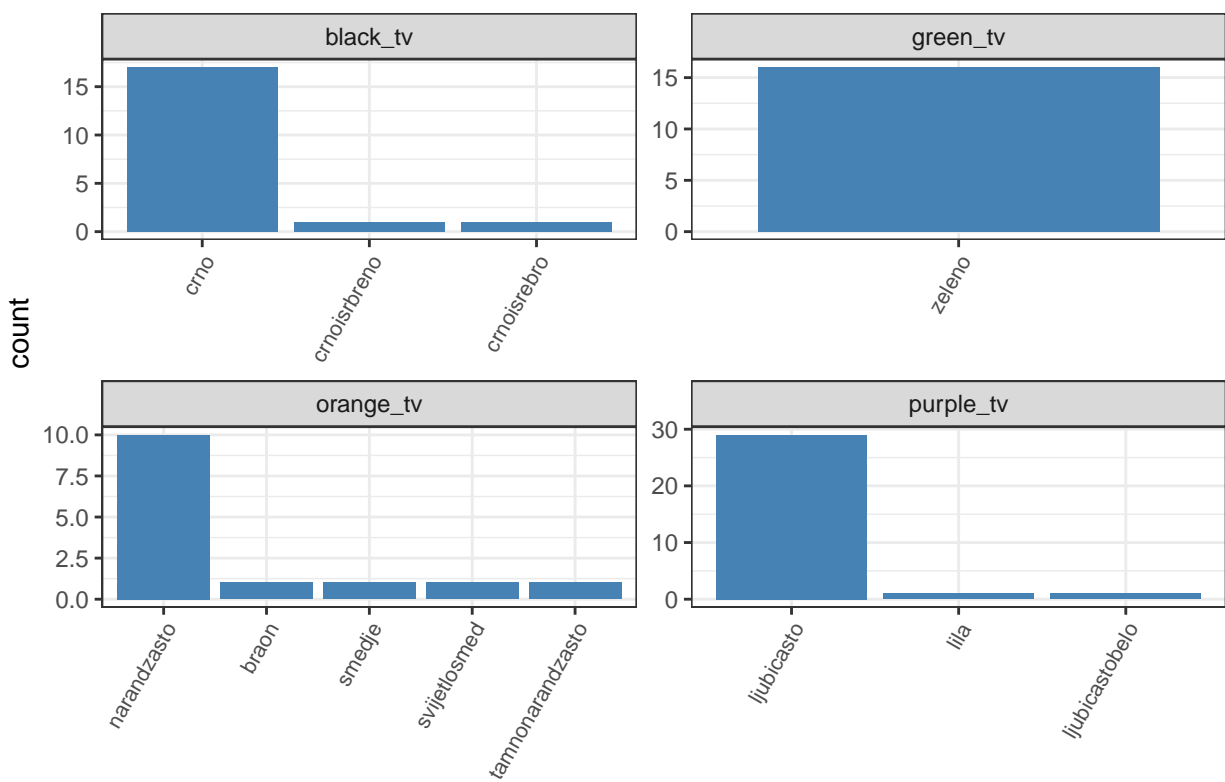

```
## 
## [[101]]
```

umbrella
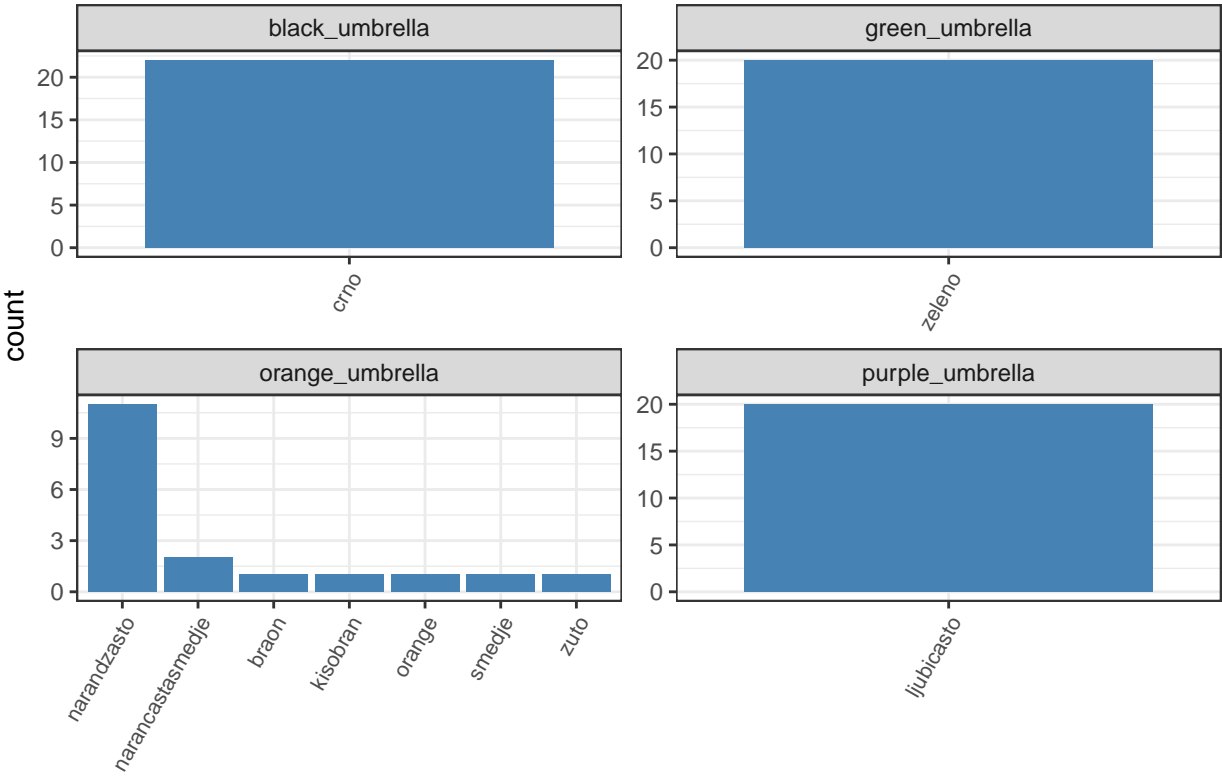

```
##
## [[102]]
```

vase
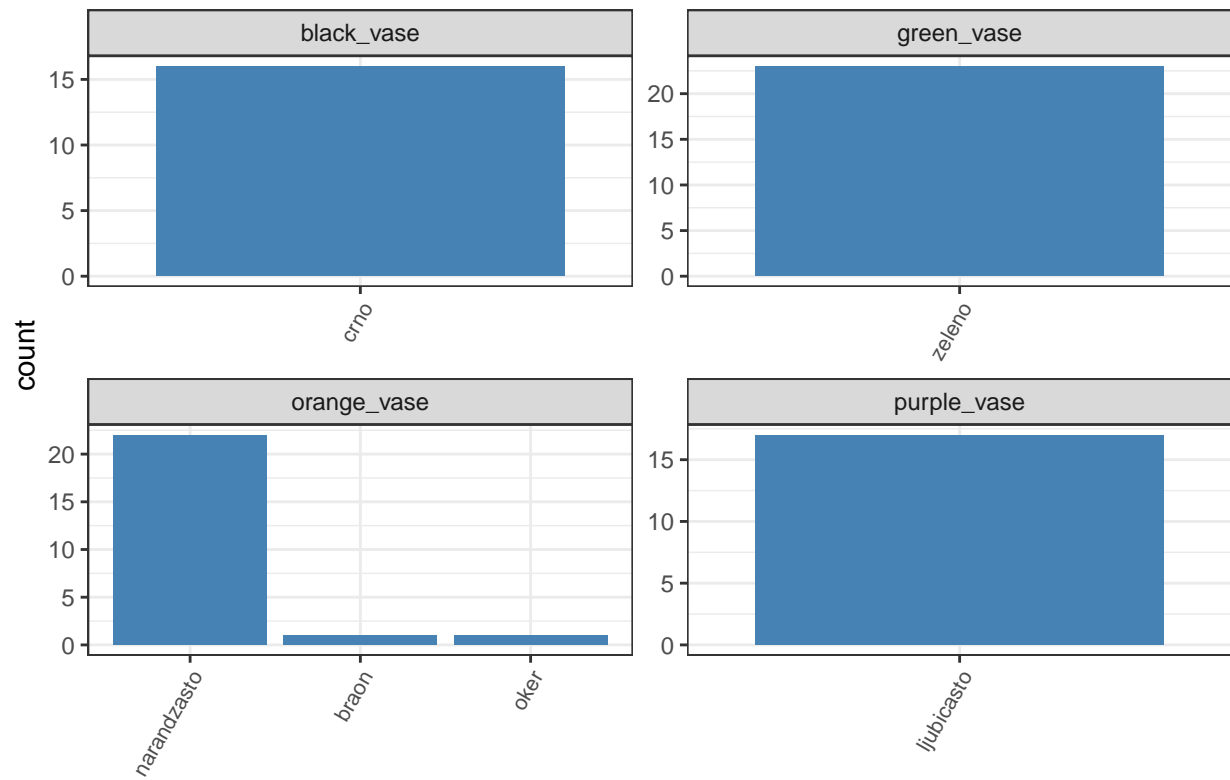

```
##
## [[103]]
```

wallet


```
## 
## [[104]]
```

whistle


```
##
## [[105]]
```

yarn