Live Coding Quiz 1 Master

SY

2/15/2023

# Overview of Quiz 1

Three categories of coding tasks:

1. information about data frame/objects
2. extract a specific element/subset (including logical operators)
3. calculation/mathematical operator

Three versions:

* A. 11:00 and 11:13 time slots
* B. 11:26 and 11:39 time slots
* C. 11:52 and 12:05 time slots

# Import data set and load packages

#install.packages("tidyverse")  
library(tidyverse)

## ── Attaching packages ─────────────────────────────────────── tidyverse 1.3.2 ──  
## ✔ ggplot2 3.3.5 ✔ purrr 1.0.1  
## ✔ tibble 3.1.8 ✔ dplyr 1.1.0  
## ✔ tidyr 1.1.4 ✔ stringr 1.4.0  
## ✔ readr 2.1.3 ✔ forcats 1.0.0  
## ── Conflicts ────────────────────────────────────────── tidyverse\_conflicts() ──  
## ✖ dplyr::filter() masks stats::filter()  
## ✖ dplyr::lag() masks stats::lag()

dw <- read.csv("dogORwolf.csv", header = T, stringsAsFactors = TRUE, fileEncoding = "UTF-8-BOM")  
head(dw)

## ID breed age\_yrs sex visual\_exploration olfactory\_exploration  
## 1 bjorn CWD 0.47 m 1 6.0  
## 2 dea CWD 1.17 f 0 13.5  
## 3 grisu CWD 2.50 m 2 5.0  
## 4 gundam CWD 2.25 m 1 17.0  
## 5 hati CWD 0.50 m 1 0.0  
## 6 iside CWD 4.00 f 2 11.0  
## manipulation gazing\_toward\_owner gazing\_toward\_experimenter look\_elsewhere  
## 1 52.0 0.00 0.95 0.00  
## 2 43.1 0.00 0.00 3.40  
## 3 42.0 0.72 1.57 8.72  
## 4 26.0 0.22 2.57 1.22  
## 5 59.0 0.00 0.00 0.00  
## 6 25.0 0.00 0.00 4.00  
## go\_elsewhere latency\_first\_gaze\_owner latency\_first\_gaze\_experimenter  
## 1 0 <NA> 00:46.9  
## 2 0 <NA> 00:00.00  
## 3 0 00:28.89 00:28.03  
## 4 12 00:31.08 00:16.39  
## 5 0 <NA> <NA>  
## 6 18 <NA> <NA>  
## gaze\_alternation\_owner gaze\_alternation\_experimenter other\_behaviours  
## 1 0 0 0  
## 2 0 1 0  
## 3 2 2 0  
## 4 2 4 0  
## 5 0 0 0  
## 6 0 0 0

## A

dim(dw)

## [1] 43 16

oe2 <- dw$olfactory\_exploration[dw$age\_yrs > 2]  
mean(oe2, na.rm = T) #na.rm is optional

## [1] 7.429333

## B

CWD <- subset(dw, breed == "CWD")   
# OR  
CWD <- dw %>%   
 filter(breed == "CWD")  
  
dim(CWD)

## [1] 17 16

dw$total\_exploration <- dw$visual\_exploration + dw$olfactory\_exploration  
# OR  
dw <- dw %>%   
 mutate(total\_exploration = visual\_exploration + olfactory\_exploration)

## C

is.numeric(dw$manipulation)

## [1] TRUE

is.factor(dw$manipulation)

## [1] FALSE

fdogs <- subset(dw, sex == "f")  
# OR  
fdogs <- dw %>%   
 filter(sex == "f")  
  
  
max(dw$look\_elsewhere)

## [1] 28

# OR  
summary(dw$look\_elsewhere)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
## 0.000 0.000 1.000 5.142 7.000 28.000

# Version A

## A Task 1: How many rows and columns are in the dataframe?

(1 point)

dim(dw)

## [1] 43 17

## A Task 2: Use square brackets to make a vector (array) called oe2 and put into it all of the values for olfactory\_exploration for dogs older than 2 years (age\_yrs)

(1 point)

oe2 <- dw$olfactory\_exploration[dw$age\_yrs > 2]

## A Task 3: Obtain the mean of oe2

(1 point)

mean(oe2, na.rm = T) #na.rm is optional

## [1] 7.429333

# Version B

## B Task 1: Make a subset (all columns) of the *dw* data frame called CWD, containing the breed CWD

(1 point)

CWD <- subset(dw, breed == "CWD")   
# OR  
CWD <- dw %>%   
 filter(breed == "CWD")

## B Task 2: How many rows and columns are in the *CWD* dataframe that you just made?

(1 point)

dim(CWD)

## [1] 17 17

## B Task 3: Make a new column in the *dw* dataframe called total\_exploration and put the sum of visual\_exploration and olfactory\_exploration in it

(1 point)

dw$total\_exploration <- dw$visual\_exploration + dw$olfactory\_exploration  
# OR if they are comfortable with Getting to Know the Data  
dw <- dw %>%   
 mutate(total\_exploration = visual\_exploration + olfactory\_exploration)

# Version C

## C Task 1: What kind of data is in the manipulation variable?

(1 point)

is.numeric(dw$manipulation)

## [1] TRUE

is.factor(dw$manipulation)

## [1] FALSE

## C Task 2: Make a subset (all columns) of the *dw* data frame called fdogs, containing only female dogs (sex is f)

(1 point)

fdogs <- subset(dw, sex == "f")  
# OR  
fdogs <- dw %>%   
 filter(sex == "f")

## C Task 3: What is the largest value of look\_elsewhere for the *dw* data frame?

(1 point)

max(dw$look\_elsewhere)

## [1] 28

# OR  
summary(dw$look\_elsewhere)

## Min. 1st Qu. Median Mean 3rd Qu. Max.   
## 0.000 0.000 1.000 5.142 7.000 28.000

# Task 4

(1 point)

How do you feel about this quiz? On the line below, type your response using the comment formatting so it doesn’t show up on the rendered Word document.

# Task 5

(1 point)

Knit this RMD to DOCX, and upload (1) Revised RMD and (2) DOCX to Canvas in the Quiz 1 assignment in the next five minutes.

If you are unable to render your Rmd file into a DOCX because of a problem in a particular code chunk, you may use {r eval = FALSE} instead of {r} for that code chunk. This should skip the chunks with the errors.