

Quiz-26/3/2021 Tutorium:

R Begin

1

Text

If we have installed the package, but still have this error happened „can not find the function“, then what is probably the problem?

- ☐ The code we write is wrong
- ☒ We missed to load the package, firstly we should: `library(dplyr)`

2

Text

In this syntax, `"daten_1<- read_csv2("daten_1.csv")"` , if the function code is written correctly, will this code successfully read the data ?

- ☒ NO
- ☐ YES

Because: there are two `)` in the end. The right is: `daten_1 <- read_csv2("daten_1.csv")`

3

Text

`X=2, Y=3, A=X+Y`, then what do we need to type in order to show this result in console,?

- ☐ `A=5`
- ☒ `A==5`

```
[1] TRUE
```

When you type `A=5` in R, it means you point a new 5 to A, it does not relate to

the former A, nothing will happen in this case.

When you type `A==5` in R, it means you speak to R „ hey A is exactly 5, right?“, and R answered: True!

```
Console
~/Documents/
> X=2
> Y=3
> A=X+Y
> A=5
> |
```

```
Console  Termi
~/Documents/
> X=2
> Y=3
> A=X+Y
> A=5
> A==5
[1] TRUE
> |
```

4

Text

If we want to, for instance, to check out what the "filter" function is and how does it work, what are we going to do?



Search in help window



Type "library" in console to see what will happen



Quiz-26/3/2021 Tutorium:

Type of variables

1

Text

This dataset designed to understand the factors that lead a person to leave current job for HR researches with the following variables. So...

- enrolled_university: Type of University course enrolled if any
- education_level: Education level of candidate (low, middle, high)
- experience: Candidate total experience in years
- training_hours: training hours completed

What is the type of variable for "enrolled_university: Type of University course enrolled if any" ?



Nominal



Ordinal



Interval



Ratio/Verhältnisskala



2

Text

This dataset designed to understand the factors that lead a person to leave current job for HR researches with the following variables. So...

- enrolled_university: Type of University course enrolled if any
- education_level: Education level of candidate (low, middle. high)
- experience: Candidate total experience in years
- training_hours: training hours completed

What is the type of variable for "education_level: Education level of candidate (low, middle. high)" ?



Ordinal



Nominal



Interval



Ratio/Verhältnsskala



3

This dataset designed to understand the factors that lead a person to leave current job for HR researches with the following variables. So...

- enrolled_university: Type of University course enrolled if any
- education_level: Education level of candidate (low, middle. high)
- experience: Candidate total experience in years
- training_hours: training hours completed

What is the type of variable for "experience: Candidate total experience in years" ?



Ordinal



Nominal



Interval



Ratio/Verhältnsskala



4

Text

This dataset designed to understand the factors that lead a person to leave current job for HR researches with the following variables. So...

- enrolled_university: Type of University course enrolled if any
- education_level: Education level of candidate (low, middle. high)
- experience: Candidate total experience in years
- training_hours: training hours completed

What is the type of variable for "training_hours: training hours completed" ?

- ☐ Norminal
- ☐ Ordinal
- ☒ Ratio/Verh ltnisskala
- ☐ Interval

5

Text

Bike sharing systems are new generation of traditional bike rentals where whole process from membership, rental and return back has become automatic. The following are the factors that we are going to discuss:

hr : hour (0 to 23)

holiday : weather day is holiday or not (extracted from [Web Link])

weekday : day of the week

cnt: count of total rental bikes including both casual and registered
so, what is the type of cnt in this research?

- ☐ Nominal
- ☐ Ordinal
- ☐ Interval
- ☒ Ratio/Verh ltnisskala

6

Text

Bike sharing systems are new generation of traditional bike rentals where whole process from membership, rental and return back has become automatic. The following are the factors that we are going to discuss:

mnth : month (1 to 12)

hr : hour (0 to 23)

holiday : weather day is holiday or not (extracted from [Web Link])

weekday : day of the week

so, what is the type of hour in this research?

- ☐ Nominal
- ☐ Ordinal
- ☐ Interval
- ☒ Ratio/Verhältnisskala

7

Text

Bike sharing systems are new generation of traditional bike rentals where whole process from membership, rental and return back has become automatic. The following are the factors that we are going to discuss:

mnth : month (1 to 12)

hr : hour (0 to 23)

holiday : weather day is holiday or not (extracted from [Web Link])

weekday : day of the week

so, what is the type of holiday in this research?

- ☒ Nominal
- ☐ Ordinal
- ☐ Interval
- ☐ Ratio/Verhältnisskala

8

Text

Bike sharing systems are new generation of traditional bike rentals where whole process from membership, rental and return back has become automatic. The following are the factors that we are going to discuss:

mnth : month (1 to 12)

hr : hour (0 to 23)

holiday : weather day is holiday or not (extracted from [Web Link])

weekday : day of the week

so, what is the type of weekday in this research?



Nominal



Ordinal



Interval



Ratio/Verhältnisskala



Quiz-26/3/2021 Tutorium:

Normal distribution and Z value

1

Text

Which of the following z-score values represents the location farthest from the mean?



$z = +1.00$



$z = +2.00$



$z = +0.5$



$z = +1.00$



[https://www.youtube.com/watch?](https://www.youtube.com/watch?v=2tuBREK_mgE&list=RDCMUCCiyrRcEuDSzInajTud90Sw&index=3)

[v=2tuBREK_mgE&list=RDCMUCCiyrRcEuDSzInajTud90Sw&index=3](https://www.youtube.com/watch?v=2tuBREK_mgE&list=RDCMUCCiyrRcEuDSzInajTud90Sw&index=3)

2

Text

Which one is the standard normal distribution ?



mean=0, standard deviation=1



mean=0, standard deviation=0



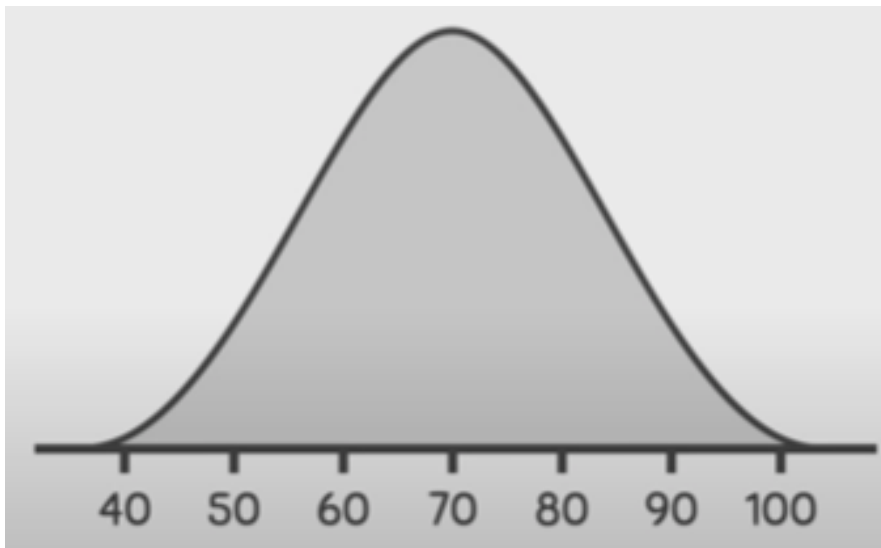
mean=1, standard deviation=0



mean=1, standard deviation=1



3



Text

The normal distribution showing has a standard deviation of 10. Approximately what area is contained between 70 and 90?



47.5%



95%



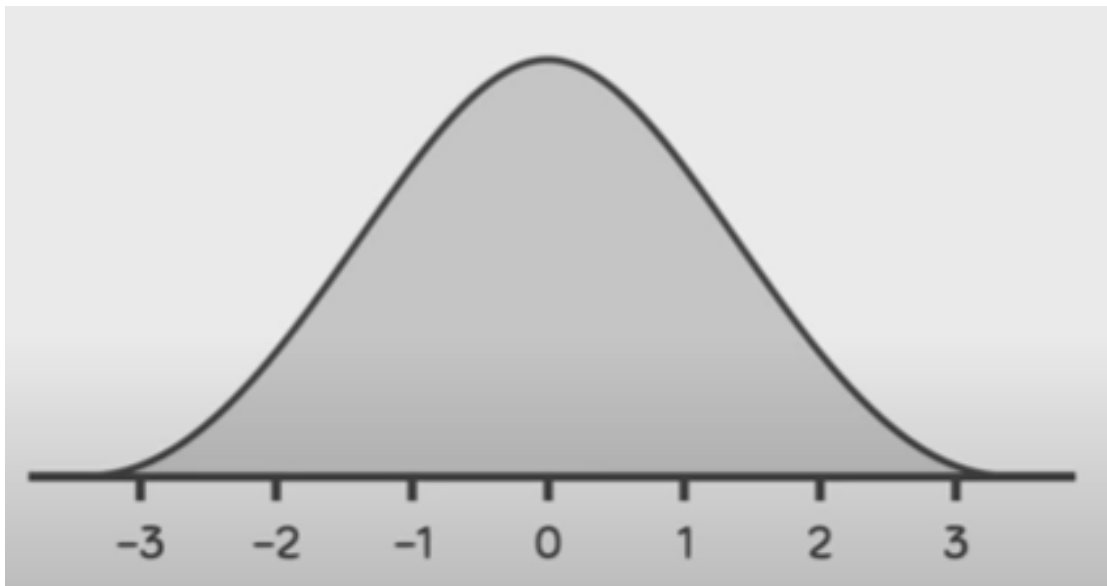
68%



100%



Explanation at 6:23 in this video: <https://www.youtube.com/watch?v=mtbJbDwqWLE&t=12s>



Text

For the normal distribution showing, approximately what area is contained between -2 and 1?



81.5



47.5



34



96



Explanation at 7:28 in this video: <https://www.youtube.com/watch?v=mtbJbDwqWLE&t=12s>

Text

When measuring the heights of all students at a local uni, it was found that normally distributed with a mean height of 5.5 feet, and a standard deviation of 0.5 feet. If we want to know what proportion of students are between 5.81 feet and 6.3 feet tall, what is the corresponding z value range?



$$0.62 < x < 1.6$$



$$x < 0.62$$



$$x > 1.6$$



$$\text{Left } z = (5.81 - 5.5) / 0.5 = 0.62$$

$$\text{Right } z = (6.3 - 5.5) / 0.5 = 1.6$$

6

Text

Suppose that we gathered data from last years final mathe exam and found that it followed a normal distribution with a mean of 60 and standard deviation of 10. What is the corresponding of Z value of students scored less than 49 on the exam?



$$-1.1$$



$$+1.1$$



$$-2.2$$



$$+2.2$$



$$z = (49 - 60) / 10 = -1.1$$