



University of  
Inland Norway

**Scientific Communication,  
Collaboration and Design in  
Quantitative Research Using R**

**R you serious, is R easy?**

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# 1 R you kidding me?

This is a text. It explains something important. Combining code and text with Quarto is ...

R you sure that R is best? Read Wickham et al. (2017) book on R and data science to find out for yourself.

## 1.1 Showing of R code and output

In the `sim-rawdata.R` file I made a dataset with the following code:

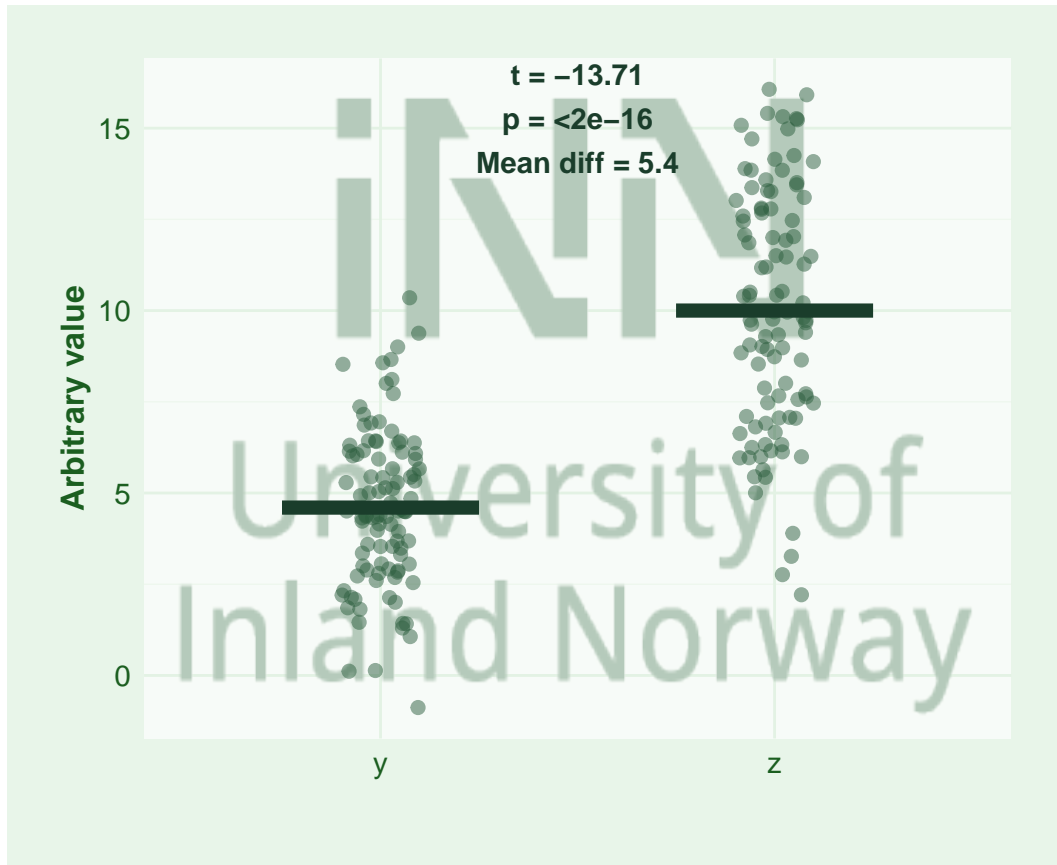
```
# simulating a dataset
rawdata <- data.frame(y = rnorm(100, mean = 5, sd = 2),
                      z = rnorm(100, mean = 10, sd = 3))
```

This is a snippet of what the dataset looks like:

```
# A tibble: 6 x 2
      y      z
  <dbl> <dbl>
1  4.32  7.88
2  8.00 15.9
3  6.06  9.73
4  6.08  9.96
5  4.73  6.63
```

6 2.73 5.97

This is a “detailed” plot of the data with all t-test info of statistical differences between y and z.



**Figure 1.** R you sure about this figure? -no. Green points indicates individual values. Green crossline indicates the group average value.

The code chunk below stores statistical results and data summaries R objects, which is useful for writing results in quarto text.

```
# import the statistics
stats <- readRDS("data/derived-data/stats.RDS")

# store t test results in text form
test_results <- paste0(round(diff(stats$estimate), 2),
                        " (p = ", format.pval(stats$p.value, digits = 3),
                        ")")

# import summarized data
sum.data <- readRDS("data/derived-data/sum.data.RDS")

# store mean and sd for variable y in text form
y_sum <- paste0(sprintf("%.1f", sum.data[1, 1]),
                " \u00b1 ",
                sprintf("%.1f", sum.data[1, 2]))

# store mean and sd for variable z in text form
z_sum <- paste0(sprintf("%.1f", sum.data[1, 3]),
                " \u00b1 ",
                sprintf("%.1f", sum.data[1, 4]))
```

This paragraph utilizes the stored text objects above. z's average score of  $10.0 \pm 3.3$  was 5.4 ( $p = <2e-16$ ) higher than y's average score of  $4.6 \pm 2.2$ .

## 1.2 Basic quarto text syntax

*Italic*, **Bold**, ***ItalicBold***, ~~Strikethrough~~, inline code, <sup>superscript</sup>, <sub>subscript</sub>. You can combine formats like ***bold and italic*** or **bold with** code or *italic with* <sup>superscript</sup>. You can make colored text: red, yellow, blue, green, purple, orange.

## References

Wickham, H., Grolemund, G., et al. (2017). *R for data science* (Vol. 2). O'Reilly Sebastopol.