

July 18, 2023

The results below are generated from an R script.

```
# Assignment: ASSIGNMENT 5
# Name: Reppeto, Brian
# Date: 2023-07-18

## Set the working directory to the root of your DSC 520 directory
setwd("~/DSC520/dsc520")

## Load the `data/r4ds/heights.csv` to
heights_df <- read.csv("data/r4ds/heights.csv")

## Using `cor()` compute correclation coefficients for
## height vs. earn
cor_coeff_height_earn <- cor(heights_df$height, heights_df$earn)
cor_coeff_height_earn

## [1] 0.2418481

### age vs. earn
cor_coeff_age_earn <- cor(heights_df$age, heights_df$earn)
cor_coeff_age_earn

## [1] 0.08100297

### ed vs. earn
cor_coeff_ed_earn <- cor(heights_df$ed, heights_df$earn)
cor_coeff_ed_earn

## [1] 0.3399765

## Spurious correlation
## The following is data on US spending on science, space, and technology in millions of today's dollars
## and Suicides by hanging strangulation and suffocation for the years 1999 to 2009
## Compute the correlation between these variables
tech_spending <- c(18079, 18594, 19753, 20734, 20831, 23029, 23597, 23584, 25525, 27731, 29449)
suicides <- c(5427, 5688, 6198, 6462, 6635, 7336, 7248, 7491, 8161, 8578, 9000)
spur_corr <- data.frame(tech_spending, suicides)

corr_coef_spur <- cor(spur_corr$tech_spending, spur_corr$suicides)
corr_coef_spur

## [1] 0.9920817
```

The R session information (including the OS info, R version and all packages used):

```
## R version 4.3.0 (2023-04-21)
## Platform: aarch64-apple-darwin20 (64-bit)
## Running under: macOS Ventura 13.4.1
##
## Matrix products: default
## BLAS: /System/Library/Frameworks/Accelerate.framework/Versions/A/Frameworks
## LAPACK: /Library/Frameworks/R.framework/Versions/4.3-arm64/Resources/lib/libR
##
## locale:
## [1] en_US.UTF-8/en_US.UTF-8/en_US.UTF-8/C/en_US.UTF-8/en_US.UTF-8
##
## time zone: America/New_York
## tzcode source: internal
##
## attached base packages:
## [1] stats      graphics  grDevices  utils      datasets  methods    base
##
## other attached packages:
## [1] knitr_1.43
##
## loaded via a namespace (and not attached):
## [1] compiler_4.3.0  tools_4.3.0      rstudioapi_0.14  highr_0.10        xfun_0.39
## [6] evaluate_0.21
```

```
## [1] "2023-07-18 20:16:12 EDT"
```