

# Socio-Informatics 348

## Practical 9

### Submission Instructions

- Submit your completed practical as `studentnumber.qmd` on SocSciLearn.
- Submissions are checked for completeness, not correctness.
- At least 80% of exercises must be attempted to receive 1% towards AF assessment.
- Attendance of at least one practical session per week is required to earn the 1% for that week's practical.

### Deadline

Friday 17 October, 17:00 (submit on SocSciLearn)

### Exercises

1. Practice your `across()` skills by:
  - Computing the number of unique values in each column of `palmerpenguins::penguins`.
  - Computing the mean of every column in `mtcars`.
  - Grouping `diamonds` by cut, clarity, and color then counting the number of observations and computing the mean of each numeric column.
2. Adjust `expand_dates()` to automatically remove the date columns after they've been expanded. Do you need to embrace any arguments?

```
expand_dates <- function(df) {  
  df |>  
    mutate(  
      across(where(is.Date), list(year = year, month = month, day  
                                   = mday))  
    )  
}
```

3. Explain what each step of the pipeline in this function does. What special feature of `where()` are we taking advantage of?

```
show_missing <- function(df, group_vars, summary_vars = everything()) {  
  df |>  
    group_by(pick({{ group_vars }})) |>  
    summarize(  
      across({{ summary_vars }}, \(x) sum(is.na(x))),  
      .groups = "drop"  
    ) |>  
    select(where(\(x) any(x > 0)))  
}  
nycflights13::flights |> show_missing(c(year, month, day))
```