Workshop resources

Packages

You will need the following packages:
- `{tidyverse}`
- `{lterdatasampler}`
- `{naniar}`
- `{data.table}`
- `{effsize}`

Formulas to be comfortable with

One-sample t-statistic:

$$t_s = \frac{\bar{x} - \mu}{s/\sqrt{n}}$$

Margin of error:

$$margin = t * \frac{s}{\sqrt{n}}$$

Confidence interval:

$$CI = [\bar{x} - t * \frac{s}{\sqrt{n}}, \bar{x} + t * \frac{s}{\sqrt{n}}]$$

Cohen's d:

$$Cohen'sd = \frac{\bar{x_1} - \bar{x_2}}{\sqrt{(s_1^2 + s_2^2)/2}}$$

What we did

- **looked at the data**: `str()`, finding missing data
- **wrangled the data**: `filter()`, `mutate() + case_when()`
- **summarized the data**: `summarize()`
- **checked for normally distributed data**: visually, used `stat_qq()` and `stat_qq_line()`
- **checked for equal variances**: `var.test()`
- **calculated a critical value**: `qt()`
- **did a t-test**: `t.test()`
- **calculated effect size**: `cohen.d()`