

```
library(dplyr)

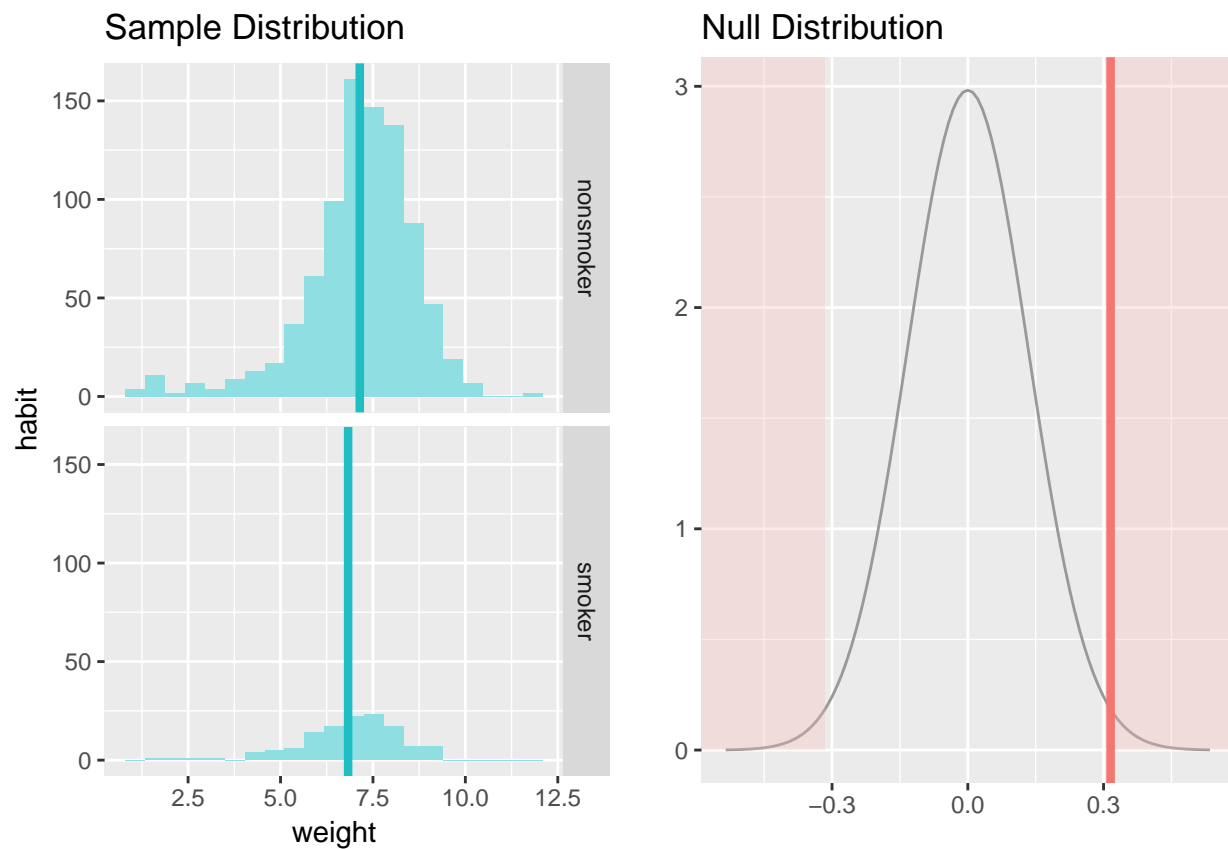
##
## Attaching package: 'dplyr'
## The following object is masked from 'package:GGally':
##
##      nasa
## The following objects are masked from 'package:stats':
##
##      filter, lag
## The following objects are masked from 'package:lubridate':
##
##      intersect, setdiff, union
## The following objects are masked from 'package:base':
##
##      intersect, setdiff, setequal, union
library(ggplot2)
library(oilabs)

data(nc)
```

conducting hypothesis tests for weight with different habit (smoke/non-smoke)

```
inference(y = weight, x = habit, data = nc, statistic = "mean",
          type = "ht", null = 0, alternative = "twosided",
          method = "theoretical")

## Response variable: numerical
## Explanatory variable: categorical (2 levels)
## n_nonsmoker = 873, y_bar_nonsmoker = 7.1443, s_nonsmoker = 1.5187
## n_smoker = 126, y_bar_smoker = 6.8287, s_smoker = 1.3862
## H0: mu_nonsmoker = mu_smoker
## HA: mu_nonsmoker != mu_smoker
## t = 2.359, df = 125
## p_value = 0.0199
```



constructing confidence interval

```
inference(y = weight, x = habit, data = nc, statistic = "mean", type = "ci",
          method = "theoretical", order = c("smoker", "nonsmoker"))

## Response variable: numerical, Explanatory variable: categorical (2 levels)
## n_smoker = 126, y_bar_smoker = 6.8287, s_smoker = 1.3862
## n_nonsmoker = 873, y_bar_nonsmoker = 7.1443, s_nonsmoker = 1.5187
## 95% CI (smoker - nonsmoker): (-0.5803 , -0.0508)
```

