Noise difference between sites

Kyra Bankhead

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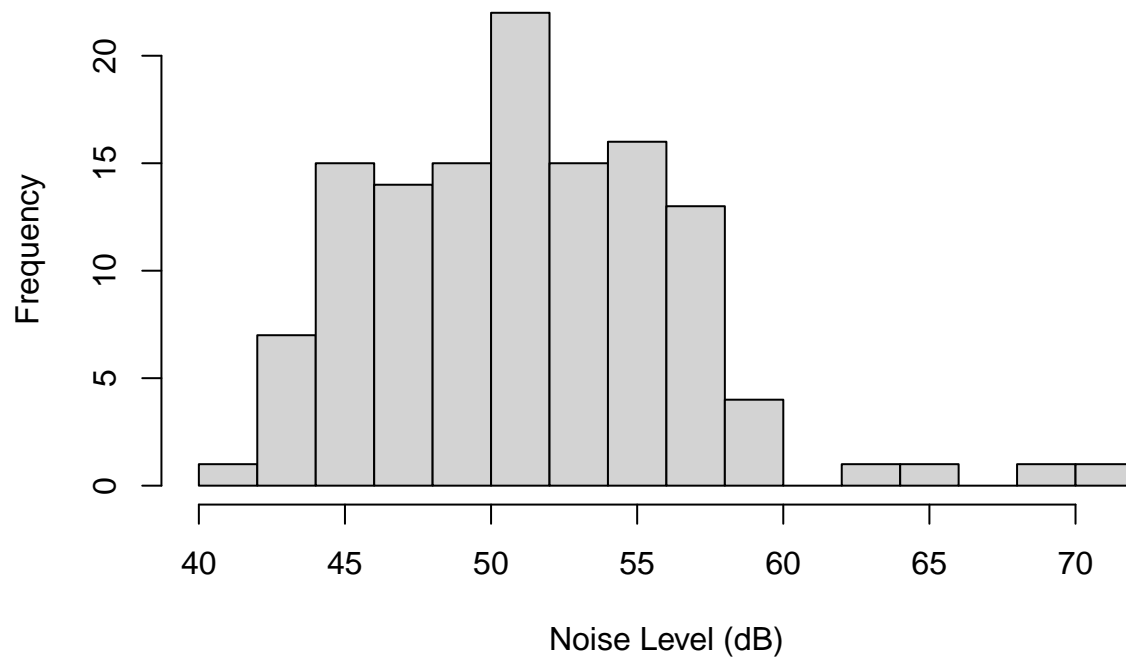
In this markdown I will:

1. Check the assumptions of a t-test.

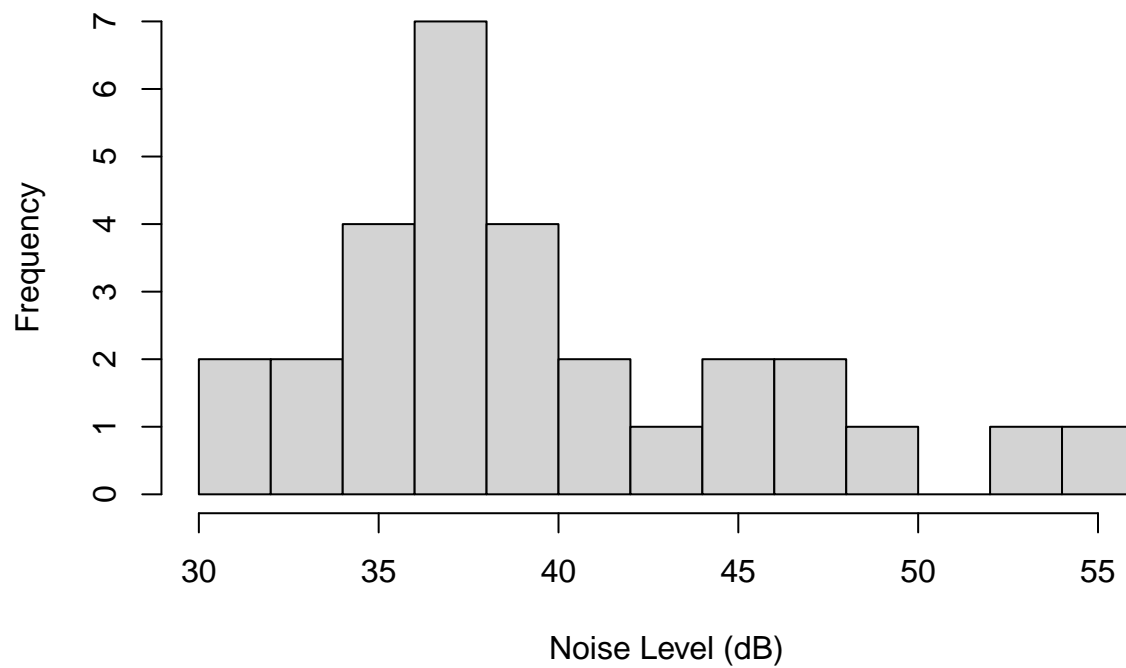2. Run a wilcox test on the noise levels between sites.

Check t-test assumptions

Are the noise levels normal within sites?

Waterfront

Marina

The marina site has nonnormality in noise levels.

Are the noise level variences equal between sites?

```r
full.data<-read.csv("../data/full.data.csv")

# waterfront
var(full.data$noise[full.data$site == "waterfront"])
```

```
## [1] 27.20042
```

```r
# marina
var(full.data$noise[full.data$site == "marina"])
```

```
## [1] 37.49616
```

Variences are not equal. Therefore we need to run a wilcox test (U-test).

Check Wilcox Test

```
##
##  Wilcoxon rank sum test with continuity correction
##
## data:  noise by site
## W = 324.5, p-value = 5.513e-12
## alternative hypothesis: true location shift is not equal to 0
```

```
## [1] 5.513251e-12
```

The noise levels between sites are significantly different.