

Neural Data Science Spring 2022

Homework 3

“HW1_2022_data.xlsx” is the gift that keeps on giving!

- 1) Compute a `t.test` (using the `t.test` command) comparing the mean investigation time across all 3 trials for each mouse between WT and KO groups.
- 2) Use an `lm` command to carry out the same comparison (i.e. a linear model predicting mean investigation time from genotype) and pass the model object to `summary()`. Does this give the same result as the t-test?
- 3) Use `lm` to construct a model where you compare both effects of Genotype and Trial in the same analysis (i.e., `investigation_time ~ trial + genotype`). Pass the resulting model to both `summary()` and `anova()`. How does the output of `summary()` and `anova()` differ?

You should submit (via Slack DM) your R code (that starts with the unedited HW1_2022_data.xlsx) before the beginning of class **February 14**.