EXERCISES

**General Linear Model**

Analyse Balanced.csv. This file contains information on fluency scores based upon four naming tasks with one task given to each group (one control and two patient groups).

Analyse this using a between subjects ANOVA.

Try using with and without as.factor(). What difference do you see?

Do the tasks perform similarly with respect to one another across the groups?

Use the emmeans library to explore simple effects to decompose this interaction

looking at differences in pairs of tasks in each group.

**Generalised Linear Models**

Hospital 1

|  |  |  |
| --- | --- | --- |
|  | Recovered | Dead |
| New | 95 | 800 |
| Old | 5 | 100 |

Hospital 2

|  |  |  |
| --- | --- | --- |
|  | Recovered | Dead |
| New | 400 | 5 |
| Old | 400 | 195 |

Is there a difference in recovery rates between the treatments **in each** hospital?

Pool the two hospitals together and analyse this pooled table to see if there is a difference in the two recovery rates between the treatments? Compare with your results for each hospital. What do you notice and can you explain this?

**Generalised Linear Mixed Models**

Look up in the output the regression coefficient for grpTreatment:timePost.

Use the means outputted by the effect function to compute this regression coefficient. What contrast does grpTreatment:timePost represent?

In general what contrast does grpTreatment:timek represent for a time period, k?