MSc Stats notes

General notes:

* Additive model better (not within one vector), don’t over complicate
* Can keep year in separate models
* **Do not nest RTU within rep**—prob part of reason post hocs not working
* www.DDAR.datavis.ca

Things to do:

1. Standardise rate by one variable (i.e. divide number of visits by flower number), then use the other as an **offset variable** at the end of the model (i.e. total video length as offset variable—asked about two offsets instead, apparently never really done like that)
2. Use poission/quasipoission/negatibe binomial distribution most likely. Can log-transform etc if need be.
3. After GLM model constructed for model ‘m’, do **effect plots** for all high-order terms in the model (i.e. temp, RTU, etc). **library (effects), plot (all effects(m))**
4. Instead of using lsmeans as a posthoc comparison tool, create **contrasts**. Contrasts allow you to test specific questions within your data, without looking at ALL the possiblitites that a shotgun approach like lsmeans provides. This allows you to test the questions your predictions ask more directly.

Steps:

1. Create matrix for what you want to compare, for example:

SX +3\* -1\*\* 0\*\*\*

SA +3 -1 +1

SAA -2 0 0

OA -2 0 -2

AMB -2 0 +1

\*comparing the average (combination of) of SA and SX (all shrub plots) with SAA, OA, AMB (all annual plots)

\*\*comparing the two larrea plots SA and SX (one with annuals under, and one without)

\*\*\*Comparing the two shrub species with annuals under SA and AMB (combined averages), with open areas (OA)

1. Contrasts (net.treatment) <- matrix (c(3,3,-2,-2,-2

1,-1,0,0,0

0,1,0,-2,1)

1. To test RTU within treatment, you can use **“linearhypothesis”** within **car** package**.** Thistests separate components of the main effect (treatment)