Methods in Experimental Ecology II (PCB 6468)
Exercise 5 - Logistic Regression

Somebody used camera traps to evaluate the presence/absence of native rodents to study the effect of percentage of fragment area covered in shrubs on rodent incidence in three distinct populations in France.

In each population [po p), the researchers set up ten circular plots, where they measured shrub coverage [shr ub] and setup **N** can1era traps to record rodent presence (the result, C, indicates how many of the traps recorded rodent presence, not their abundance, as individual identity could not be determined) .

1. Use the Exercise5_data.R script provided in the class website to generate a sample [rodents) following the description above (you only need to run it once and then keep the data as a fixed input for your analyses).,

2. Choose the most approp1iate and informative model to analyze the data and present its coefficient estimates, significance values and confidence intervals.

3. Plot your results in an informative manner.

4. Calculate *p* (the predicted probability of rodent presence) for an area with 50% shrub cover in each of the three locations.

5. Evaluate your chosen model with a Bayesian approach (uninformed priors) and compare the results.

6. Interpret the biologicalsignificanceof these results.

NOTE: Please submit your paper as a single word document Remember to include your raw data and all the appropriate R code as appendices at the end.