

The M1 statistics course will have two assignments on which your mark is based. One on inference using GLM's and mixed models, one on model-based mixture analysis.

## GLM & MIXED MODEL PROJECT DESCRIPTION

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- On dryad (datadryad.org) I used "generalized linear model", "glm" or "mixed model" to find datasets that use these methods. Among the results, I have selected data from recent publications that you can use for analysis.
- Choose a dataset on which you will work.
- Inspect the data using graphical means and summary tables.
- Define the scientific question you want to investigate using these data and carry out a glm or mixed model analysis on the dataset.
- Use model comparison and model assessment to support your inference and conclusions.

The report should contain the following:

### *Introduction*

Describe the scientific question.

### *Material and methods*

Explain the names of response and explanatory variables. Present your choice of models fitted to the data and motivate it where possible with preliminary data inspection. Describe the methods of inference you will use.

### *Results*

Lead your reader through your model selection, model assessment and hypothesis testing. Use tables and graphs to support the written text.

### *Discussion*

What are the conclusions drawn from your analysis? What are the potential issues that would need to be resolved with new data or a different analysis? What can you say on the analysis in the source publication?

### *References*

*Multi-author reports: describe the contribution of each author to the results presented*