Data exploration, regression, GLM and GAM course

Exercise 13: Logistic regression drug mites data

Data description

As an attempt to develop a pest management program to eradicate *Varroa destructor* form *Apis mellifera* colonies, research has been conducted on the effects of commercial pesticides under laboratory conditions. Maggi (unpublished data) tested the toxicity and concentration of four pesticides after 24 hours of being applied to several batches. An Initial number of four mites (*V. destructor)* were introduced on each individual batch and the proportion of dead animals was calculated after the experiment.

Underlying question and task

The aim of this exercise is to get familiar with logistic regression (proportional data). The underlying question behind this experiment is to know whether the "killing success of *V. destructor*" versus pesticide concentration is changing per toxin (pesticide).