

What is GLM Deviance?

William Ruth

11/01/2022

First, extract the threshold=20 group and fit a main-effects quasi-binomial GLM

Define some formulas for what I think the deviance might be. First, is formula (9.4) in McCullagh and Nelder. This is -2 times the integrated quasi-likelihood. My second guess is the same formula, but with every (additive) term not depending on the parameters removed.

Next, extract fitted values and compute some guesses for what the deviance might be.

Finally, get the deviance from the fitted glm object and check our guesses.

```
## [1] "Fitted deviance: 43071074.9769337"
```

```
## [1] "First guess: 43071074.9769337"
```

```
## [1] "Second guess: 962872161.881066"
```

```
## [1] "Guess 1 matches."
```