

Continuous version of the binomial likelihood

Adam Howes

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- Non-integer counts in `df$y` due to the use of survey weights
- Currently using `round(df$y)` but this is an unsatisfying solution
- In `stan` and `TMB` a custom continuous version of the binomial likelihood could be implemented
- In `R-INLA` there is the `xbinomial` function for non-integer counts
 - Be warned that this may make the marginal likelihood not interpretable as it is not clear what to do with the normalising constant
- Keywords to investigate
 - Bayesian pseudo likelihood
- <https://stats.stackexchange.com/questions/310676/continuous-generalization-of-the-negative-binomial-distribution>
- INLA google group links
 - [https://groups.google.com/forum/#!searchin/r-inla-discussion-group/Jeff\\$20Eaton%7Csort:date/r-inla-discussion-group/FLpdv5jB90w/kSwlgxb9AgAJ](https://groups.google.com/forum/#!searchin/r-inla-discussion-group/Jeff$20Eaton%7Csort:date/r-inla-discussion-group/FLpdv5jB90w/kSwlgxb9AgAJ)
 - <https://groups.google.com/forum/#!topic/r-inla-discussion-group/k5KbmV3HKPU>