

HOMEWORK #11

DUE NOV 28

INSTRUCTIONS:

A) For each question, include a:

1. a narrative answer that directly and clearly answers the question, or
2. a summary output table and/or graphs, as appropriate.

B) Provide your code in an Appendix, organized so that we can relate it to questions

C) Submit a pdf (with your name in the file name).

Using the `parasites.txt` data set on the course web site:

See `parasites.txt` on the course web page. Here we explore an observational data set collected through the years by a veterinary practice. Health records for dogs were recorded, where infected (no = 0, or yes = 1) represents whether a dog was had heartworms sometime in its life, and potential predictors of at time of infection are: age (in months), weight (pounds), and sex (male or female). Our goal: can we predict heartworm infection, to help steer veterinary diagnoses?

1. List and justify your alternative models to test – in *both code and in words*. [1 pt]
2. Compute and compare alternative models to match the above hypotheses (don't forget a null like I did!). [1 pt]
3. Show results and explain in words what the most-plausible model results tell you. [1 pt]
4. Graph your most plausible model, where the graph includes the predicted model results for infected and uninfected dogs and data as points. [1 pt]
5. Translate all this to a group of veterinarians [1 pt.]