**Stat 616 Generalized Linear Models, Homework 6** **Spring 2019**

**Due: Thursday, March 21, 2019**

1. ***From Dobson & Barnett, An Introduction to Generalized Linear Models, p. 151***
   Read p.151, 152 about other summary statistics for goodness of fit, such as AIC.

2. ***From Kutner et al., Applied Linear Regression Models, p. 609.***
   Refer to the Pregnancy Duration Data (p. 609), repeat the analysis on p.613 (the response variable is treated as Nominal categorical) using R or other statistical software. Compare your results with the ones in the text (from Minitab). Are they the same? If not, what is the cause? Interpret the parameters in the context of the problem.

3. ***From Dobson & Barnett, An Introduction to Generalized Linear Models, p. 163***
   **Exercises 8.2 (a, b)** In addition, test whether there is interaction effect between "type of housing" and "contact with other neighbors" on the response variable "satisfaction."

~~The following questions are moved to HW 07.~~

~~4. ***From Kutner et al., Applied Linear Regression Models, p. 609.***~~
   ~~Refer to the Pregnancy Duration Data (p. 609), repeat the analysis on p. 617 (the response variable is treated as Ordinal categorical and a proportional odds model is used) using R or other statistical software. Compare your results with the ones in the text (from Minitab). Are they the same? If not, what is the cause? Interpret the parameters in the context of the problem.~~

~~5. ***From Dobson & Barnett, An Introduction to Generalized Linear Models, p. 163***~~
   ~~**Exercises 8.2 (c, d)**~~
   - ~~In part (c), use a proportional odds model without interaction. Then,~~
     ~~i. Conduct a Pearson goodness of fit test.~~
     ~~ii. Use Likelihood Ratio Test to test whether adding interaction improves the model.~~
   - ~~Note that in this case, the proportional odds model with interaction is NOT the saturated model.~~

This is the end of HW 6.