Stat 704, Homework 4

1. Refer to the **Brand Preference** data in 6.5 (I have placed a copy of the data in Blackboard to answer the following questions.

   (a) 7.3a, 7.3b

   (b) 7.12 (Compute only R^2_{Y1}, $R^2_{Y1|2}$, and R^2_{12}. Explain and interpret each measure.

   (c) 7.16a, 7.16b. Request the covariance and correlation matrices for the slope parameters with both the `covb` and `corrb` options in the `MODEL` statement and discuss. Note: `PROC STANDARD` in SAS can be used to compute the correlation transformation for your variables.

   (d) 7.24

2. 8.1 and 8.2. Prepare either a contour plot or wireframe plot, according to your preference. In either case, comment on the shape of the response surfaces. I found that a range of (-2,2) worked fine for both x_1 and x_2.

3. 8.29. Note that x is the centered version of X.

4. Refer to the **Job Proficiency** data in 9.10 (I have placed a copy of the data in Blackboard to answer the following questions.

   (a) 9.10 a-c. For part a, construct boxplots rather than stem-leaf plots; for part c, compute VIF's. Did you learn anything here that you did not learn from the correlation matrices and scatterplots?

   (b) 9.11

   (c) 9.18