10.4: Generalized Linear Models (GLMs)

Read Sections 13.4 to 13.4.3 of your textbook. As you read, take notes on the following.

1 For a GLM, the response variable follows a distribution that is a member of what family of distributions? List some of the distributions that belong to this family of distributions. What distribution is used for the linear regression model? How about the logistic regression model?

2 What is the basic idea in developing a linear model, in terms of the expected value of the response variable?

3 Describe how you would perform a goodness-of-fit test for a GLM.

4 Describe how you would perform a hypothesis test on a subset of parameters for a GLM.

5 Describe how you would test an individual coefficient for a GLM.

6 Describe how you would test if all coefficients are 0 for a GLM.

7 To estimate the coefficients for a GLM, what method is used?