

ST740 – Assignment 5 – Due 11/30

This assignment uses the preterm birth data used for exam 2 on the course webpage. Using these data, the assignment is to build a semiparametric model for the probability of preterm birth (`preterm` in the workspace) as a function of the mother's age (`age_M` in the workspace). That is, build a model for the function f so that

$$\text{Prob}(\text{preterm} = 1) = f(\text{age_M}).$$

You should compare several models for preterm birth and use the model selection tools discussed in class to identify the best-fitting model. In addition, present the estimated probabilities (with measures of uncertainty) for several values of mother's age.