

Question 10.3

1. Using the GermanCredit data set `germancredit.txt` from <http://archive.ics.uci.edu/ml/machine-learning-databases/statlog/german/> (description at <http://archive.ics.uci.edu/ml/datasets/Statlog+%28German+Credit+Data%29>), use logistic regression to find a good predictive model for whether credit applicants are good credit risks or not. Show your model (factors used and their coefficients), the software output, and the quality of fit. You can use the `glm` function in R. To get a logistic regression (logit) model on data where the response is either zero or one, use `family=binomial(link="logit")` in your `glm` function call.
2. Because the model gives a result between 0 and 1, it requires setting a threshold probability to separate between “good” and “bad” answers. In this data set, they estimate that incorrectly identifying a bad customer as good, is 5 times worse than incorrectly classifying a good customer as bad. Determine a good threshold probability based on your model.