

BANA 7042: Assignment 5

Multinomial & Ordinal Regression

Overview

Please review Chapter 7 of “Extending the Linear Model with R: Generalized Linear, Mixed Effects and Nonparametric Regression Models” (second edition) by Julian J. Faraway. The chapter covers multinomial and ordinal regression models, which are used for modeling categorical response variables with more than two categories. You can find a PDF copy of the book in [resources/elmr2.pdf](#) ([direct link](#)).

For this assignment, please do Exercise 1 (a)–(j) from chapter 7 located on pp. 147–148. You can load the associated data set using the following code:

```
# install.packages("faraway") # Uncomment this line to install the faraway package if you do not have it installed
head(hsb <- faraway::hsb)
```

```
   id gender  race    ses schtyp    prog read write math science socst
1  70  male white   low public  general   57   52   41     47    57
2 121 female white middle public  vocation  68   59   53     63    61
3  86  male white   high public  general   44   33   54     58    31
4 141  male white   high public  vocation  63   44   47     53    56
5 172  male white middle public  academic  47   52   57     53    61
6 113  male white middle public  academic  44   52   51     63    61
```