

Writing Statistical Modeling Functions and R Packages: Exercises

1. In the Object-Oriented Programming exercises, you wrote a function for logistic regression or for ordered logit and probit models (or both). Adapt this function so that it uses R model formulas. Provide methods for some of the standard generic functions that are used with statistical models, such as `summary()`, `print()`, `residuals()`, `logLik()`, and `anova()`.
2. Write a small R package based on the logistic-regression or ordered logit and probit function in the previous problem. Include the method functions that you wrote along with a data set appropriate for illustrating the use of the function (such as `Mroz` for logistic regression).
3. If your project involves a statistical modeling function that can use an R model formula, then adapt your function so that it does so. If your project lends itself to the creation of an R package, then this is a natural point to produce a preliminary version of the package.