

Extra exercise 3.3

Simulation experiment with OLS, best subset regression, ridge regression, the lasso and least angle regression

Extend extra exercise 3.2 by adding the lasso and least angle regression (LAR).

a) Generate *one* training data sample with $N = 20$ observations, and estimate the the model by each of the regression methods. Select tuning parameters by 10-fold cross validation.

For the lasso and LAR you can use the function `lars` from the R package `lars`. However, note that the function `lars` does not return the estimate of the intercept β_0 , so this must be computed manually.

b) Extend the simulation experiment by the lasso and LAR.