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RandomForest_vs_LinReg_vsStepwise_T12Waist

Random Forest

89 samples
45 predictors

Pre-processing: centered, scaled
Resampling: Cross-Validated (10 fold, repeated 10 times)

Summary of sample sizes: 81, 79, 80, 79, 79, 81, ...

Resampling results across tuning parameters:

  mtry  RMSE       Rsquared   RMSE SD   Rsquared SD
   2    6.130190   0.1000543  1.769809  0.1246490
  23    6.567638   0.1198999  1.729015  0.1414791
  44    6.689016   0.1237756  1.729318  0.1494542

RMSE was used to select the optimal model using  the smallest value.
The final value used for the model was mtry = 2.
Linear Regression

89 samples
45 predictors

Pre-processing: centered, scaled
Resampling: Cross-Validated (10 fold, repeated 10 times)

Summary of sample sizes: 80, 81, 78, 81, 80, 81, ...

Resampling results

  RMSE       Rsquared   RMSE SD   Rsquared SD
  9.314384   0.1271672  2.53438   0.1589824




Call:
lm(formula = T12_WaistAvg ~ T3HKQ7 + T3HKQ12 + T3HKQ15 + T3HKQ20 +
    T3HKQ22 + T3HKQ23 + T3HKQ29 + T3HKQ30 + T3HKQ32 + T3HKQ33 +
    T3HKQ35 + T3HKQ42 + T3HKQ44 + T3HKQ45, data = X[complete.cases(X[,
    c(2, 4:48)]), c(2, 4:48)])

Residuals:
    Min      1Q  Median      3Q     Max
-9.9483 -2.7939  0.4187  2.0173 15.6742

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  44.3985     9.7502   4.554 2.03e-05 ***
T3HKQ7       -1.2068     0.7141  -1.690 0.095273 .
T3HKQ12       0.9297     0.6475   1.436 0.155253
T3HKQ15       1.5639     0.6958   2.248 0.027579 *
T3HKQ20       1.9350     1.1125   1.739 0.086148 .
T3HKQ22       0.7073     0.4979   1.421 0.159601
T3HKQ23       1.4478     0.8591   1.685 0.096142 .
T3HKQ29      -2.7660     0.8611  -3.212 0.001950 **
T3HKQ30      -3.6116     1.2304  -2.935 0.004437 **
T3HKQ32      -3.8871     1.2336  -3.151 0.002348 **
T3HKQ33       5.9352     1.6800   3.533 0.000712 ***
T3HKQ35      -2.1052     1.5994  -1.316 0.192169
T3HKQ42       1.5576     0.6295   2.475 0.015633 *
T3HKQ44       0.9140     0.5236   1.746 0.085042 .
T3HKQ45       1.5337     0.9295   1.650 0.103201
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Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 5.38 on 74 degrees of freedom
Multiple R-squared:  0.3896,   Adjusted R-squared:  0.2742
F-statistic: 3.374 on 14 and 74 DF,  p-value: 0.0003247
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