

Random Forest

89 samples
46 predictors

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

Summary of sample sizes: 81, 81, 77, 80, 81, 81, ...

Resampling results across tuning parameters:

mtry	RMSE	Rsquared	RMSE SD	Rsquared SD
2	5.269354	0.4632490	1.610420	0.2686339
24	3.854230	0.6438677	1.247835	0.2271041
46	3.993507	0.6136215	1.521228	0.2661107

RMSE was used to select the optimal model using the smallest value.
The final value used for the model was mtry = 24.
Linear Regression

89 samples
45 predictors

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

Summary of sample sizes: 80, 78, 81, 81, 80, 79, ...

Resampling results

RMSE	Rsquared	RMSE SD	Rsquared SD
8.442474	0.2069426	3.114294	0.2024847

Call:

```
lm(formula = T12_WaistAvg ~ T4_WaistAvg + T3HKQ8 + T3HKQ12 +  
    T3HKQ18 + T3HKQ20 + T3HKQ29 + T3HKQ30 + T3HKQ32 + T3HKQ33 +  
    T3HKQ34 + T3HKQ37 + T3HKQ38 + T3HKQ41 + T3HKQ43, data = X[complete.cases(X[,  
    c(2, 4:48)]), c(2, 4:48)])
```

Residuals:

Min	1Q	Median	3Q	Max
-8.7437	-2.8204	-0.4021	1.8902	16.4981

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	21.76185	8.26772	2.632	0.01032	*
T4_WaistAvg	0.52401	0.08133	6.443	1.05e-08	***
T3HKQ8	0.88024	0.61036	1.442	0.15347	
T3HKQ12	1.21488	0.56429	2.153	0.03458	*
T3HKQ18	1.61807	0.71670	2.258	0.02692	*
T3HKQ20	1.32748	0.96629	1.374	0.17366	
T3HKQ29	-1.82473	0.73786	-2.473	0.01569	*
T3HKQ30	-2.12001	1.11507	-1.901	0.06116	.
T3HKQ32	-3.09584	1.10009	-2.814	0.00626	**
T3HKQ33	2.55050	1.37918	1.849	0.06841	.
T3HKQ34	2.63428	1.01229	2.602	0.01118	*
T3HKQ37	-1.32047	0.60808	-2.172	0.03310	*
T3HKQ38	-2.08546	1.14282	-1.825	0.07206	.
T3HKQ41	0.86220	0.56795	1.518	0.13325	
T3HKQ43	1.62925	0.68305	2.385	0.01963	*

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 4.571 on 74 degrees of freedom
Multiple R-squared: 0.5593, Adjusted R-squared: 0.476
F-statistic: 6.709 on 14 and 74 DF, p-value: 1.444e-08