

Random Forest

89 samples
46 predictors

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

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

Resampling results across tuning parameters:

mtry	RMSE	Rsquared	RMSE SD	Rsquared SD
2	5.271810	0.4652068	1.561544	0.2496907
24	3.876389	0.6514161	1.193582	0.2308451
46	3.990710	0.6245113	1.513744	0.2761824

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
46 predictors

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

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

Resampling results

RMSE	Rsquared	RMSE SD	Rsquared SD
8.468054	0.2000365	2.460053	0.1796715

Call:

```
lm(formula = T12_WaistAvg ~ T4_WaistAvg + T3HKQ12 + T3HKQ18 +  
    T3HKQ28 + T3HKQ32 + T3HKQ34 + T3HKQ37 + T3HKQ38 + T3HKQ41 +  
    T3HKQ43 + T4_Percentile, data = X[complete.cases(X[, c(2,  
    4:48, 92)]), c(2, 4:48, 92)])
```

Residuals:

Min	1Q	Median	3Q	Max
-7.8737	-2.4418	-0.5351	1.4374	12.7161

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	22.02511	6.05294	3.639	0.000494	***
T4_WaistAvg	0.47968	0.07629	6.288	1.79e-08	***
T3HKQ12	1.38296	0.49914	2.771	0.007008	**
T3HKQ18	1.43674	0.65818	2.183	0.032091	*
T3HKQ28	-0.74187	0.40222	-1.844	0.068962	.
T3HKQ32	-1.83684	0.92726	-1.981	0.051169	.
T3HKQ34	2.67309	0.86441	3.092	0.002765	**
T3HKQ37	-1.77201	0.52743	-3.360	0.001216	**
T3HKQ38	-3.13734	1.04247	-3.010	0.003536	**
T3HKQ41	1.55986	0.53515	2.915	0.004658	**
T3HKQ43	1.53780	0.63980	2.404	0.018641	*
T4_Percentile	0.06797	0.01664	4.084	0.000107	***

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

Residual standard error: 4.28 on 77 degrees of freedom
Multiple R-squared: 0.5981, Adjusted R-squared: 0.5407
F-statistic: 10.42 on 11 and 77 DF, p-value: 2.173e-11