testing performance package

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`Performance` package

https://easystats.github.io/performance/

```
knitr::opts_chunk$set(echo = TRUE)

library(performance)

mtcars <- mtcars
```

Use some mtcars data

```
summary(mtcars)
```

```
##       mpg             cyl             disp             hp       
##  Min.   :10.40   Min.   :4.000   Min.   : 71.1   Min.   : 52.0  
##  1st Qu.:15.43   1st Qu.:4.000   1st Qu.:120.8   1st Qu.: 96.5  
##  Median :19.20   Median :6.000   Median :196.3   Median :123.0  
##  Mean   :20.09   Mean   :6.188   Mean   :230.7   Mean   :146.7  
##  3rd Qu.:22.80   3rd Qu.:8.000   3rd Qu.:326.0   3rd Qu.:180.0  
##  Max.   :33.90   Max.   :8.000   Max.   :472.0   Max.   :335.0  
##       drat             wt             qsec             vs        
##  Min.   :2.760   Min.   :1.513   Min.   :14.50   Min.   :0.0000  
##  1st Qu.:3.080   1st Qu.:2.581   1st Qu.:16.89   1st Qu.:0.0000  
##  Median :3.695   Median :3.325   Median :17.71   Median :0.0000  
##  Mean   :3.597   Mean   :3.217   Mean   :17.85   Mean   :0.4375  
##  3rd Qu.:3.920   3rd Qu.:3.610   3rd Qu.:18.90   3rd Qu.:1.0000  
##  Max.   :4.930   Max.   :5.424   Max.   :22.90   Max.   :1.0000  
##        am              gear            carb      
##  Min.   :0.0000   Min.   :3.000   Min.   :1.000  
##  1st Qu.:0.0000   1st Qu.:3.000   1st Qu.:2.000  
##  Median :0.0000   Median :4.000   Median :2.000  
##  Mean   :0.4062   Mean   :3.688   Mean   :2.812  
##  3rd Qu.:1.0000   3rd Qu.:4.000   3rd Qu.:4.000  
##  Max.   :1.0000   Max.   :5.000   Max.   :8.000
```

Make a model, any model

For example:

```r
qsecModel <- lm(formula = qsec ~ carb + disp + wt, data = mtcars)

qsecModel
```

```
##
## Call:
## lm(formula = qsec ~ carb + disp + wt, data = mtcars)
##
## Coefficients:
## (Intercept)         carb         disp           wt
##    16.89094     -0.76113     -0.01827      2.27355
```

```r
summary(qsecModel)
```

```
##
## Call:
## lm(formula = qsec ~ carb + disp + wt, data = mtcars)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -1.4211 -0.4541 -0.1663  0.4204  2.9425
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept) 16.890942   0.652989  25.867  < 2e-16 ***
## carb        -0.761132   0.107651  -7.070 1.08e-07 ***
## disp        -0.018274   0.002758  -6.626 3.45e-07 ***
## wt           2.273554   0.354999   6.404 6.21e-07 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8746 on 28 degrees of freedom
## Multiple R-squared:  0.7837, Adjusted R-squared:  0.7605
## F-statistic: 33.81 on 3 and 28 DF,  p-value: 1.905e-09
```

Check model `performance`

```r
performance::check_model(qsecModel,
                         panel = FALSE # create 1 plot per check (otherwise we get them as smaller pane
                         )
```

```
## $PP_CHECK
```

```
##
## $NCV
```

```
##
## $HOMOGENEITY
```

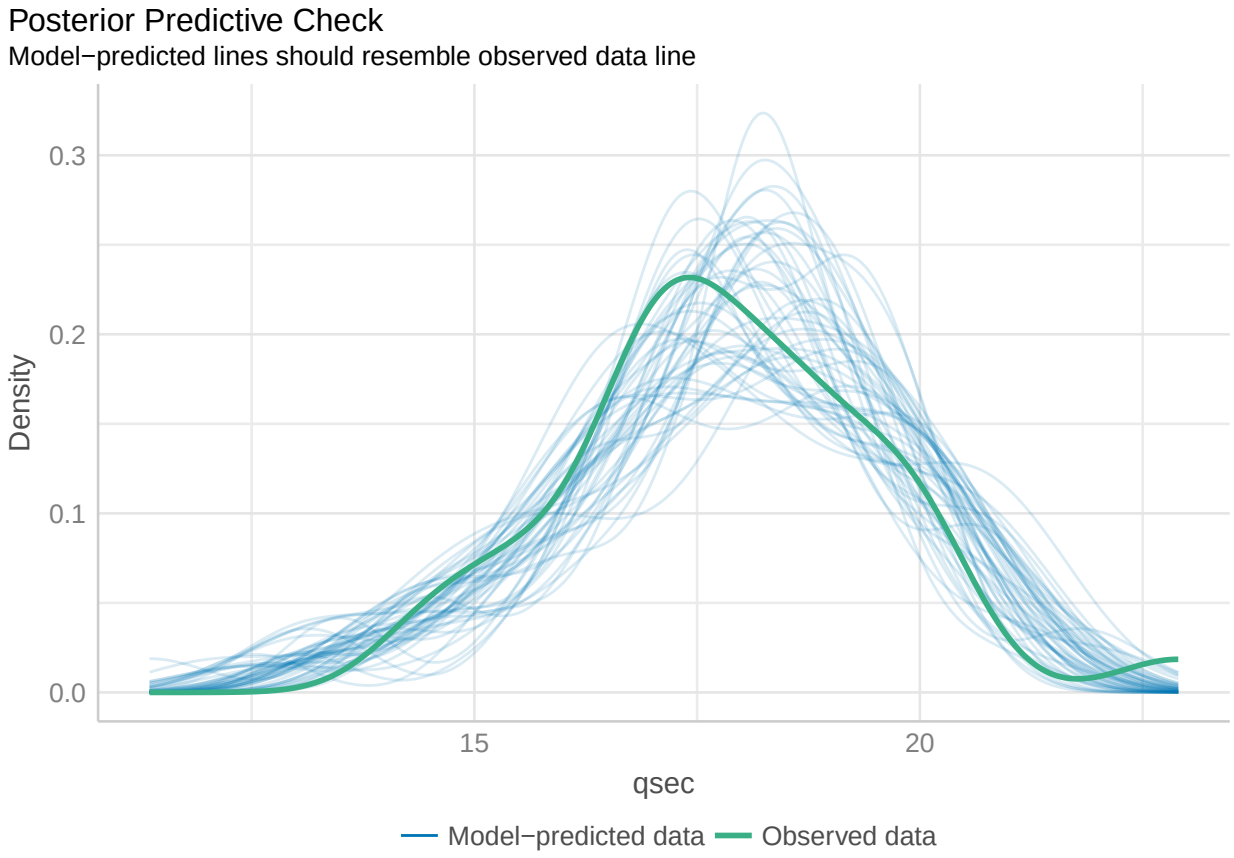


Figure 1: Testing the model

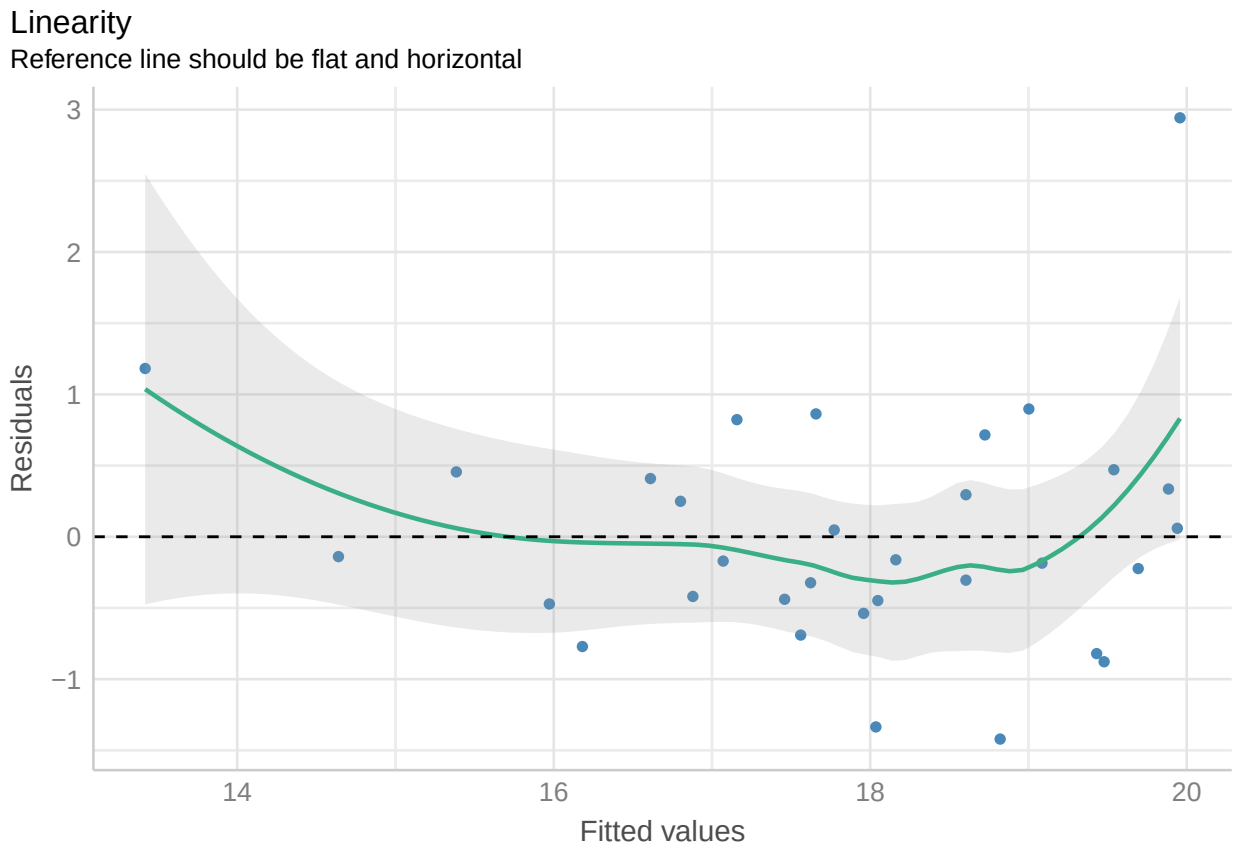


Figure 2: Testing the model

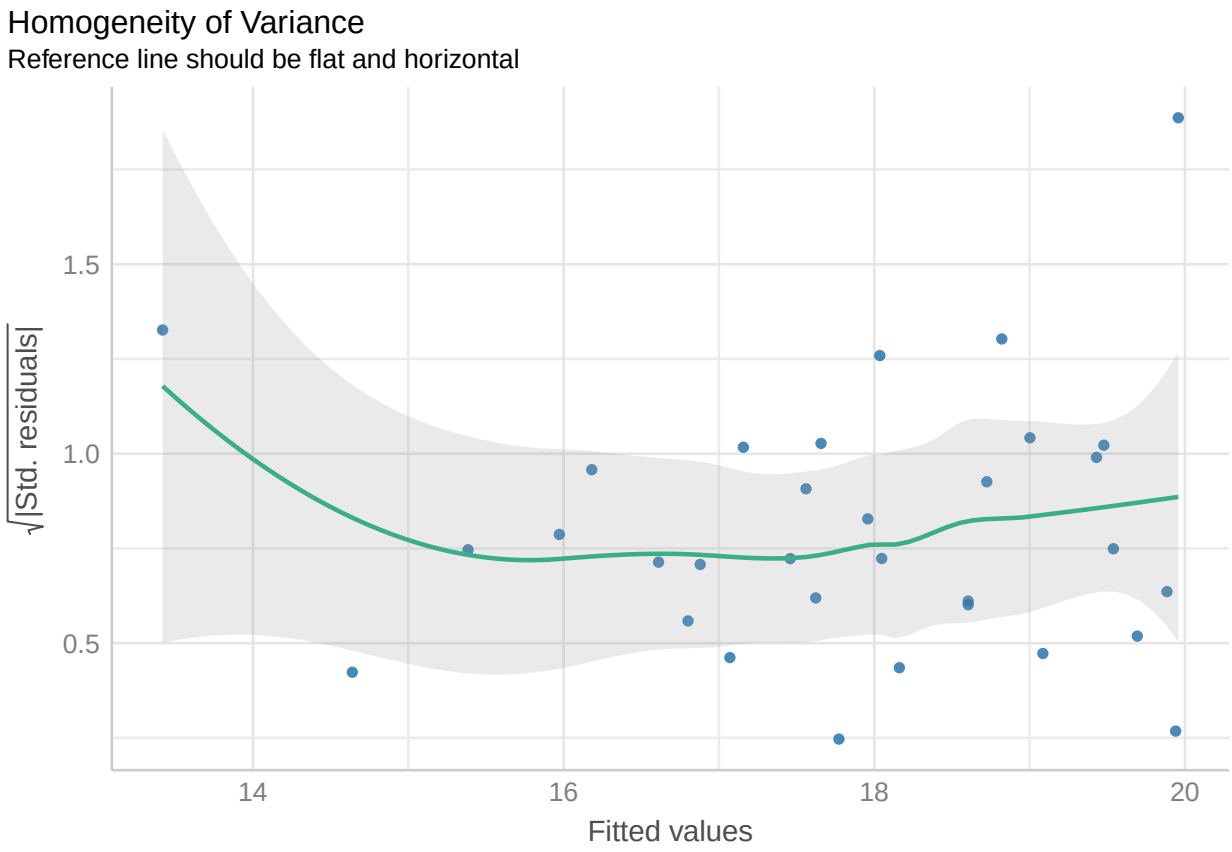


Figure 3: Testing the model

```
##
## $OUTLIERS
```

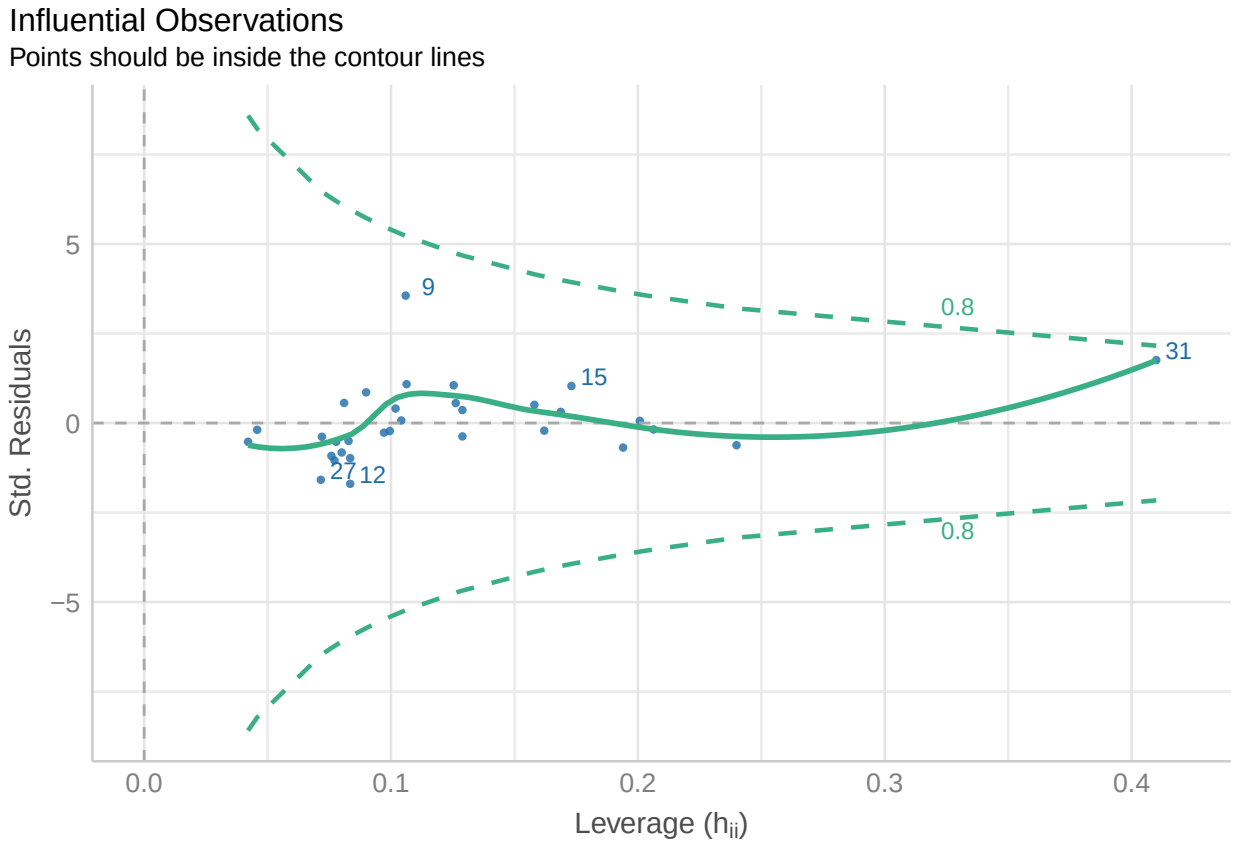


Figure 4: Testing the model

```
##
## $VIF


##
## $QQ
```

Very Nice...

Use see to look-see the model

https://easystats.github.io/see/

```
library(see)
library(parameters)
```

```
## Registered S3 method overwritten by 'parameters':
##   method                          from
##   format.parameters_distribution datawizard
```

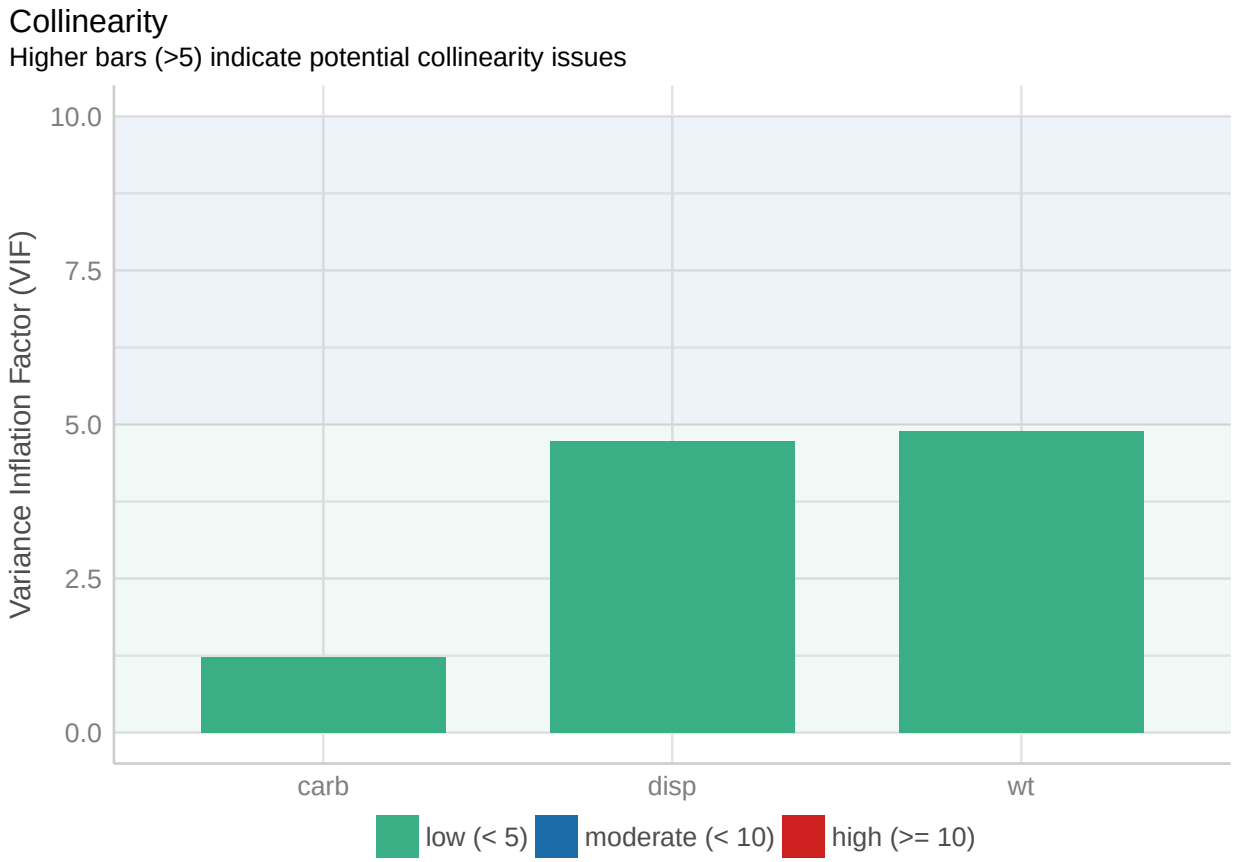


Figure 5: Testing the model

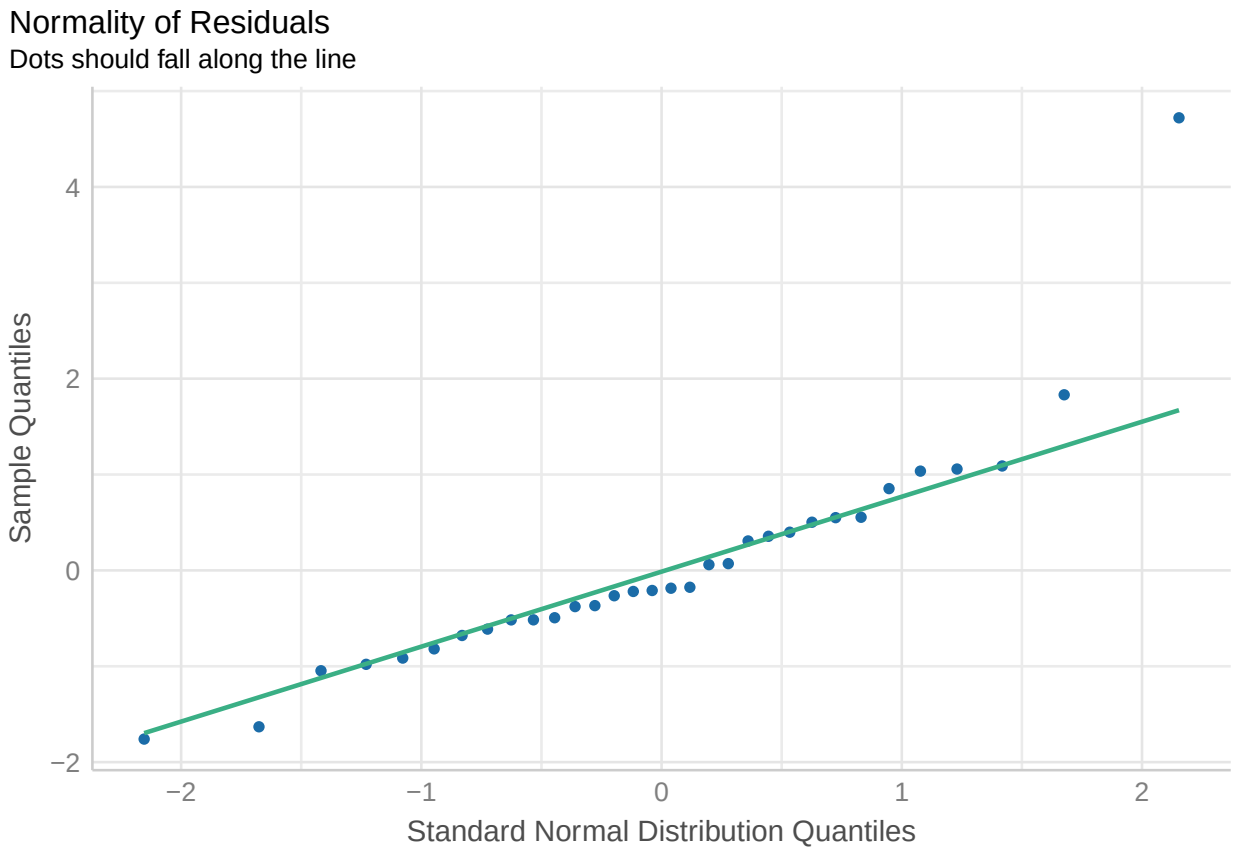
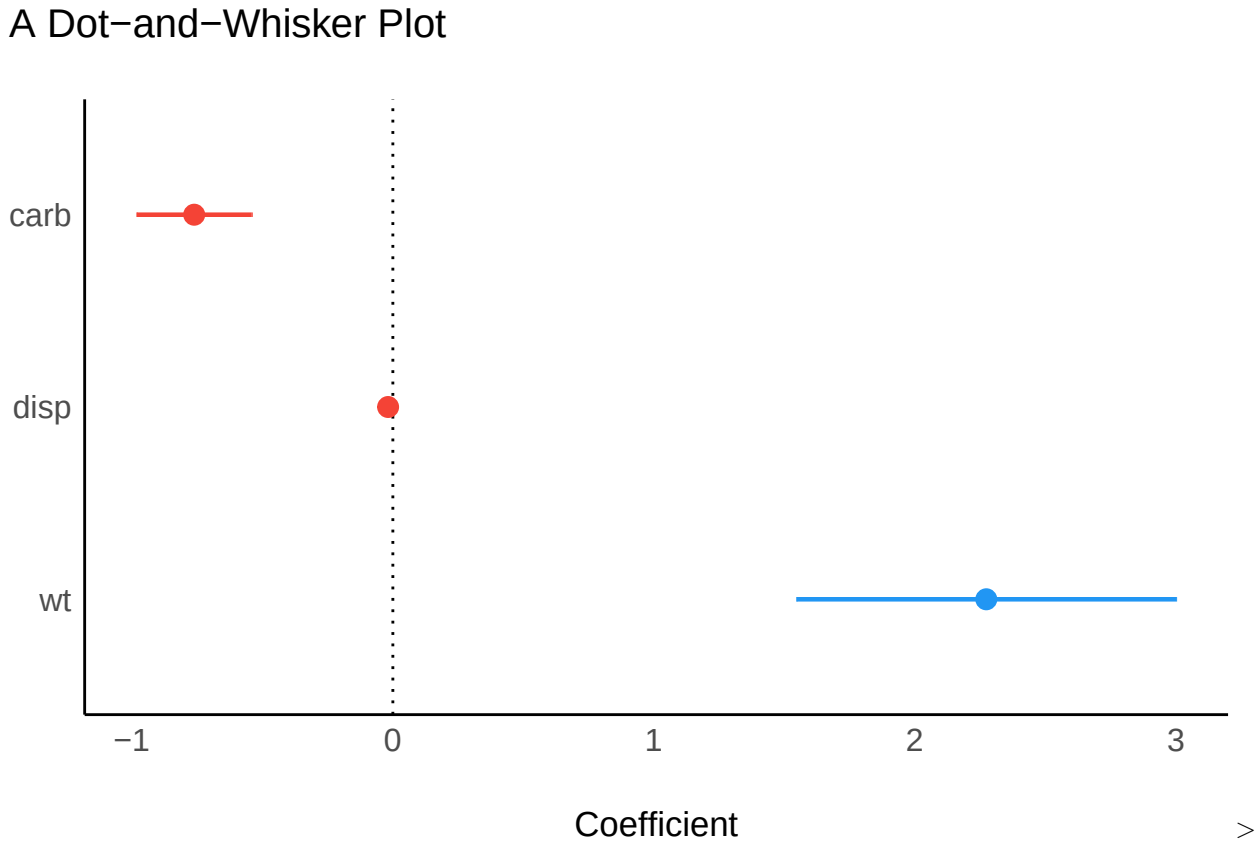


Figure 6: Testing the model

```
library(ggplot2)

plot(parameters::parameters(qsecModel)) +
  ggplot2::labs(title = "A Dot-and-Whisker Plot")
```



Oh yes, we quite like that too...

The end