STAT 8330 FALL 2015 ASSIGNMENT 1

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▶ **Exercises 2.5. Solution.**

(1).

- advantage: can fit many different functional forms; low bias; usually predict more accurately
- disadvantage: overfitting problem; sually hard to interpret; high variance

(2). If our goal is to predict more accurately, it will usually be best to choose a more flexible approach.

(3). If our goal is to make some inferences, we prefer choosing a less flexible approach because the relation between response and predictor is more explicit.

▶ **Exercises 2.6. Solution.**

(1). The essential difference between parametric and non-parametric approach is that, the parametric make an assumption of the form of f, which can reduce problem of estimating f down to one of estimating a set of parameter, but non-parametric do not make explicit assumptions about the functional form of f.

(2).

- advantage: it is easier to estimate parameter; the relation between response and predictor is more explicit;
- disadvantage: the model we choose will usually not match the true unknown form of f; sometimes need more assumption.

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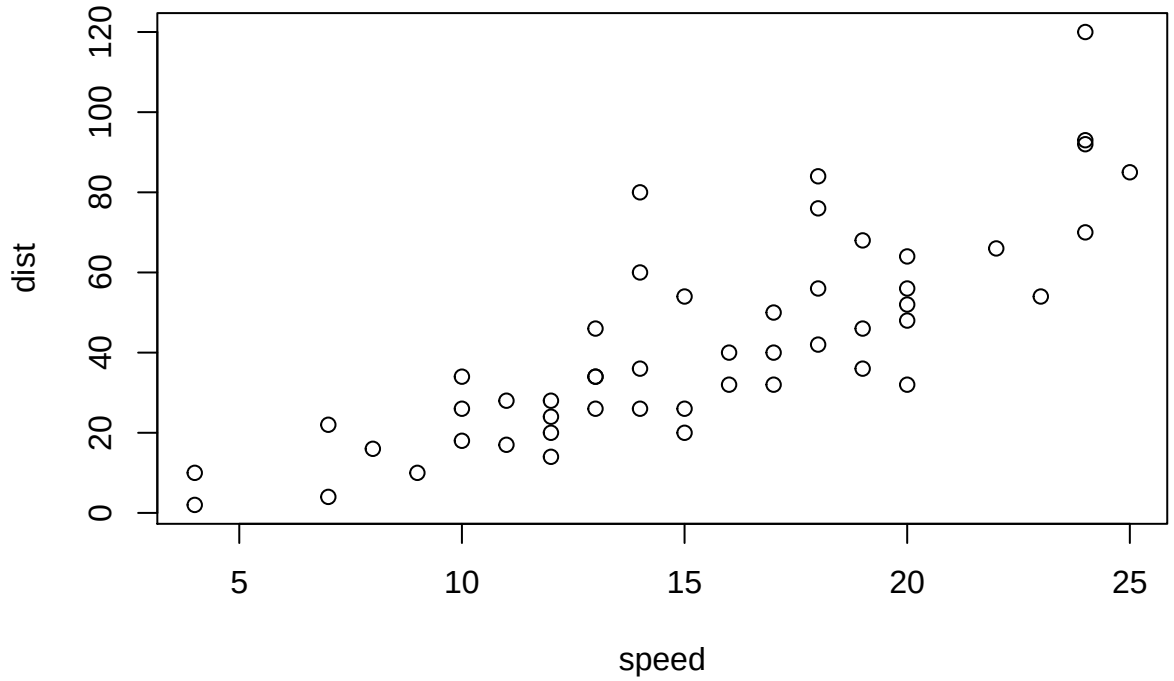
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
##      speed           dist
##  Min.   : 4.0   Min.   :  2.00
##  1st Qu.:12.0   1st Qu.: 26.00
##  Median :15.0   Median : 36.00
##  Mean   :15.4   Mean   : 42.98
##  3rd Qu.:19.0   3rd Qu.: 56.00
##  Max.   :25.0   Max.   :120.00
```

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot. s

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