

Day 12 Self-learning

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Part1 R code chunks and inline R code

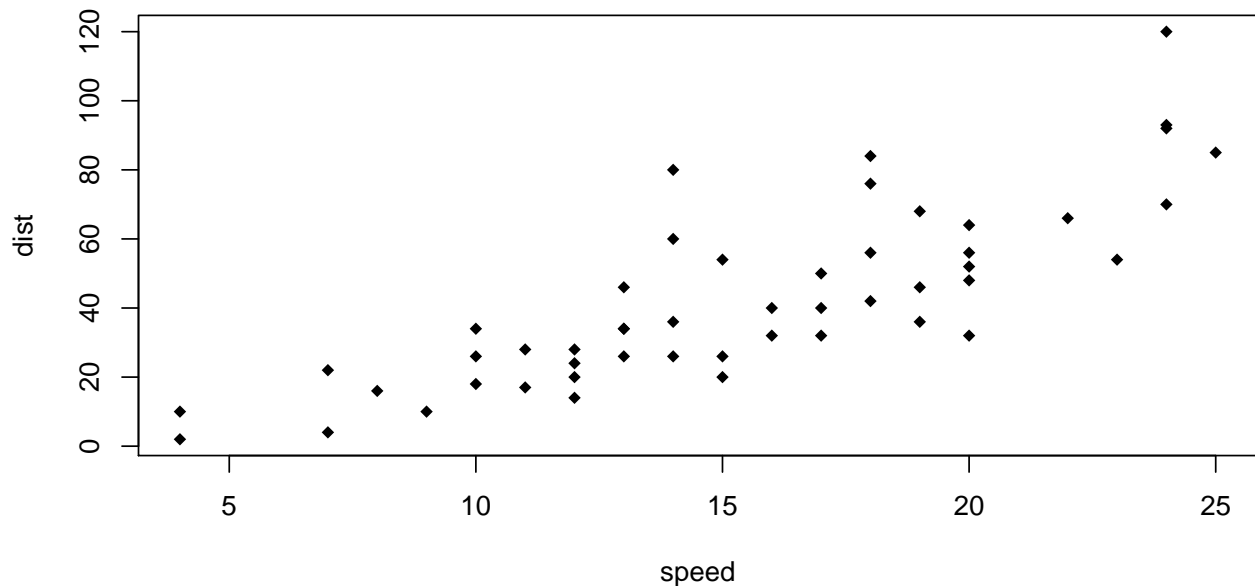
Besides code chunks, you can also insert values of R objects inline in text. For example:

```
x = 5 # radius of a circle
```

For a circle with the radius 5, its area is 78.5398163

Part2 Figures

```
plot(cars,pch=18)
```



You can provide a figure caption using `fig.cap` in the chunk options. If the document output format supports the option `fig_caption:true` (e.g., the output format `rmarkdown::html_document`), the R plots will be placed into figure environments. In the case of PDF output, such figures will be automatically numbered. If you also want to number figures in other formats (such as HTML), please see the bookdown package in Chapter 12.

PDF documents are generated through the LaTeX files generated from R Markdown. A highly surprising fact to LaTeX beginners is that figures float by default: even if you generate a plot in a code chunk on the first page, the whole figure environment may float to the next page. This is just how LaTeX works by default. It has a tendency to float figures to the top or bottom of pages. Although it can be annoying and distracting, we recommend that you refrain from playing the “Whac-A-Mole” game in the beginning of your writing, i.e., desperately trying to position figures “correctly” while they seem to be always dodging you. You may wish to fine-tune the positions once the content is complete using the `fig.pos` chunk option (e.g., `fig.pos='h'`).

To place multiple figures side-by-side from the same code chunk, you can use the `fig.show='hold'` option along with the `out.width` option. Below is an example with two plots, each with a width of 50%.

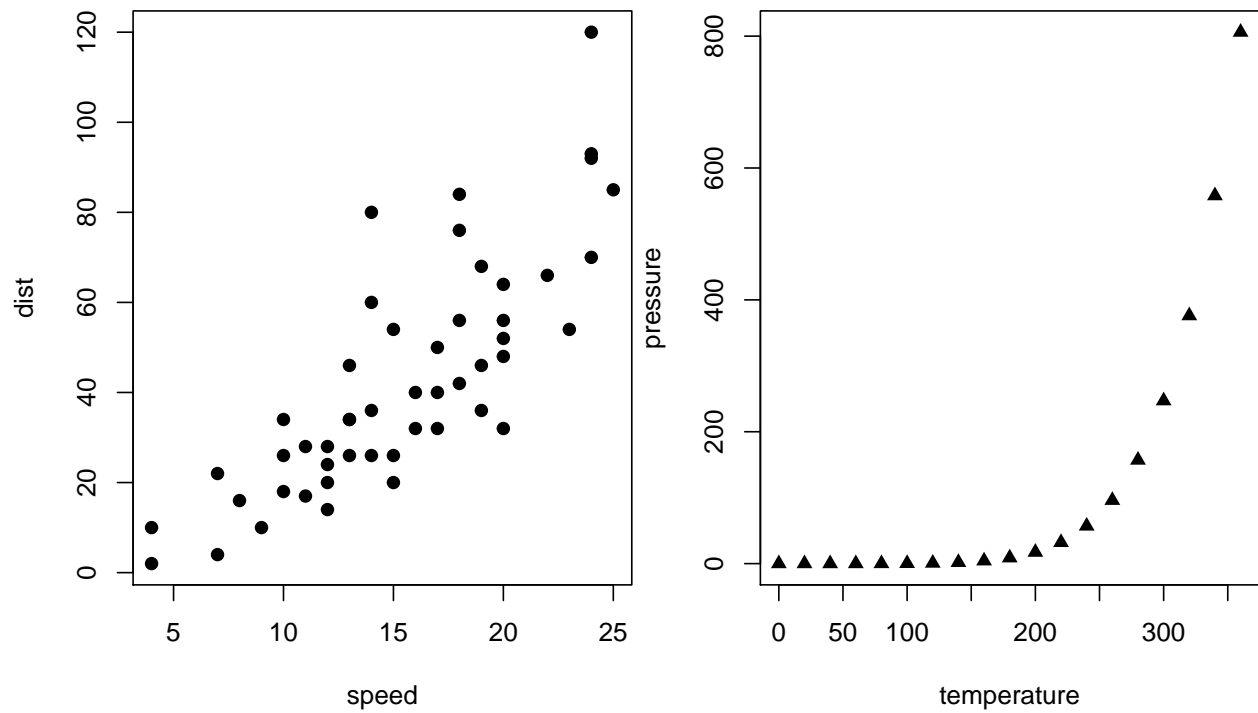


Figure 1: FIGURE 2.5: Two plots side-by-side

```
par(mar=c(4,4,0.2,0.1),mfrow=c(1,2))
plot(cars,pch=19)
plot(pressure,pch=17)
```

Tables

The easiest way to include tables is by using `knitr::kable()`, which can create tables for HTML, PDF and Word outputs. Table captions can be included by passing `caption` to the function, e.g.,

```
knitr::kable(iris[1:5,],caption='A Caption')
```

Table 1: A Caption

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.1	3.5	1.4	0.2	setosa
4.9	3.0	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa
4.6	3.1	1.5	0.2	setosa
5.0	3.6	1.4	0.2	setosa