

## Session 4

```
library(nycflights13)
library(tidyverse)
```

```
## -- Attaching packages ----- tidyverse
```

```
## v ggplot2 3.3.2      v purrr  0.3.4
## v tibble  3.0.3      v dplyr  1.0.2
## v tidyr   1.1.2      v stringr 1.4.0
## v readr   1.4.0      v forcats 0.5.0
```

```
## Warning: package 'ggplot2' was built under R version 4.0.3
```

```
## Warning: package 'dplyr' was built under R version 4.0.3
```

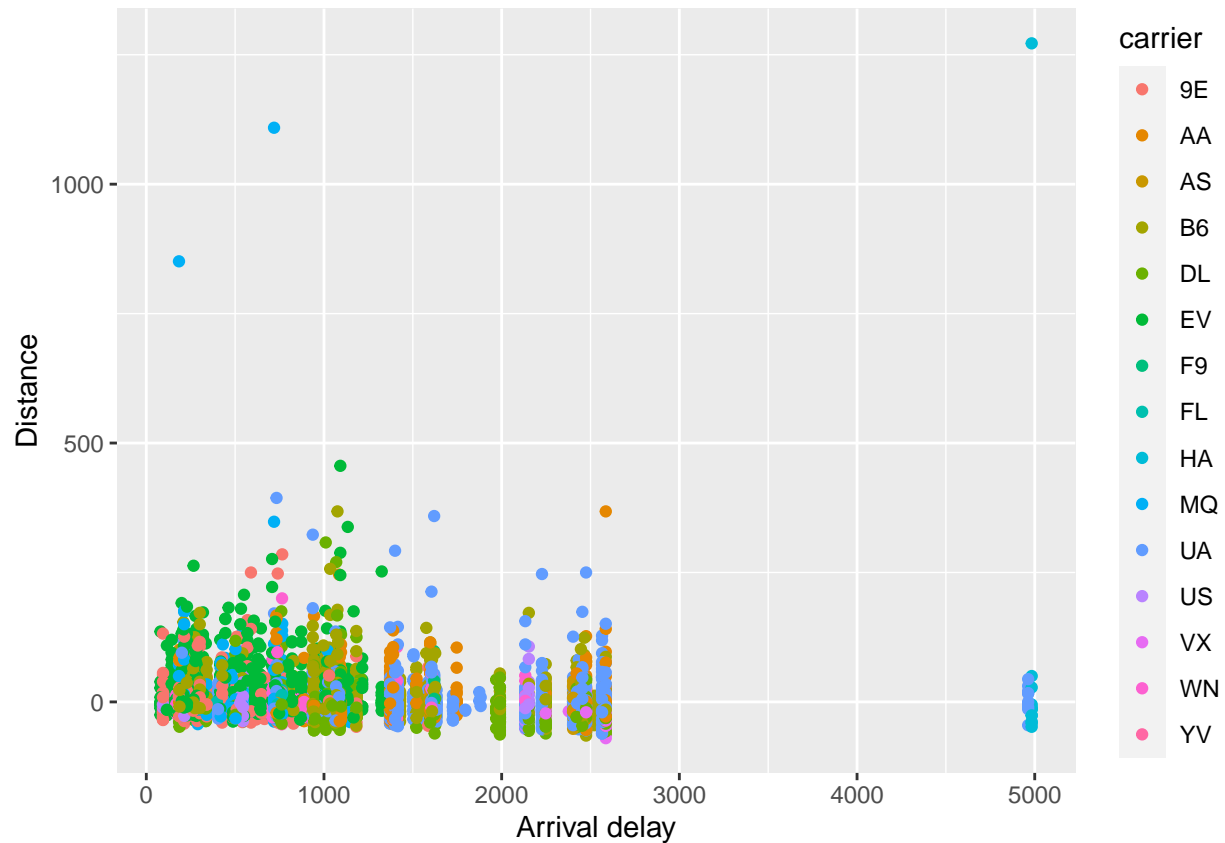
```
## -- Conflicts ----- tidyverse
```

```
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
```

```
library(ggplot2)
df <- head(flights, 10000)
# no need for group by

ggplot(df, aes(x = distance, y = arr_delay, color = carrier)) +
  geom_point() +
  labs(x = "Arrival delay", y = "Distance")
```

```
## Warning: Removed 89 rows containing missing values (geom_point).
```



## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

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
```

## Including Plots

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.