Dates and Times

Bryana Benson
Conner Bryan

1/15/2019

Reading in CSV for Central Park Temps

```
library("readr")
prices <- read_csv("http://richardtwatson.com/data/electricityprices.csv")
```

```
head(prices)
```

```
## # A tibble: 6 x 2
##   timestamp            cost
##   <dttm>              <dbl>
## 1 2010-01-01 00:00:00  6.49
## 2 2010-01-01 01:00:00  5.54
## 3 2010-01-01 02:00:00  6.50
## 4 2010-01-01 03:00:00  6.54
## 5 2010-01-01 04:00:00  5.65
## 6 2010-01-01 05:00:00  6.56
```

Create a random subset of 10 rows using the code shown below.

```
library("dplyr")
```

Generate a random sample of 10 row from the table temps.

```
sampleprices <- sample_n(prices, 10)
```

Manipulating Dates and Times

```
library("lubridate")
```

Year

```
sampleprices$year <- year(sampleprices$timestamp)
```

Month

```
sampleprices$month <- month(sampleprices$timestamp)
```

Day in month

```
sampleprices$days_in_month <- days_in_month(sampleprices$timestamp)
```

Day in week as a number

```
sampleprices$wday <- wday(sampleprices$timestamp)
```

Day in week as a string

```
sampleprices$weekdays <- weekdays(sampleprices$timestamp)
```

Hour

```
sampleprices$hour <- hour(sampleprices$timestamp)
```

Which years are leap years

```
sampleprices$leap_year <- leap_year(sampleprices$timestamp)
```

Sample Prices Dataset showing conversions

```
sampleprices
```

```
## # A tibble: 10 x 9
##    timestamp            cost  year month days_in_month  wday weekdays  hour
##    <dttm>              <dbl> <dbl> <dbl>         <int> <dbl> <chr>    <int>
##  1 2010-11-03 04:00:00  5.56  2010    11            30     4 Wednesd~     4
##  2 2010-02-22 12:00:00  7.01  2010     2            28     2 Monday      12
##  3 2010-06-05 23:00:00  7.01  2010     6            30     7 Saturday    23
##  4 2015-08-30 14:00:00  5.91  2015     8            31     1 Sunday      14
##  5 2012-09-17 12:00:00  6.50  2012     9            30     2 Monday      12
##  6 2014-11-24 08:00:00  6.35  2014    11            30     2 Monday       8
##  7 2010-06-20 06:00:00  5.95  2010     6            30     1 Sunday       6
##  8 2011-02-02 12:00:00  7.17  2011     2            28     4 Wednesd~    12
##  9 2012-10-13 14:00:00  6.48  2012    10            31     7 Saturday    14
## 10 2012-04-18 03:00:00  4.70  2012     4            30     4 Wednesd~     3
## # ... with 1 more variable: leap_year <lgl>
```

```
sampleprices[,c(1,9)]
```

```
## # A tibble: 10 x 2
##    timestamp           leap_year
##    <dttm>              <lgl>
##  1 2010-11-03 04:00:00 FALSE
##  2 2010-02-22 12:00:00 FALSE
##  3 2010-06-05 23:00:00 FALSE
##  4 2015-08-30 14:00:00 FALSE
##  5 2012-09-17 12:00:00 TRUE
##  6 2014-11-24 08:00:00 FALSE
##  7 2010-06-20 06:00:00 FALSE
##  8 2011-02-02 12:00:00 FALSE
##  9 2012-10-13 14:00:00 TRUE
## 10 2012-04-18 03:00:00 TRUE
```