Simulated Options Trading

```
knitr::opts_chunk$set(echo = FALSE,
                      results = "hide")

library(tidyverse)
```

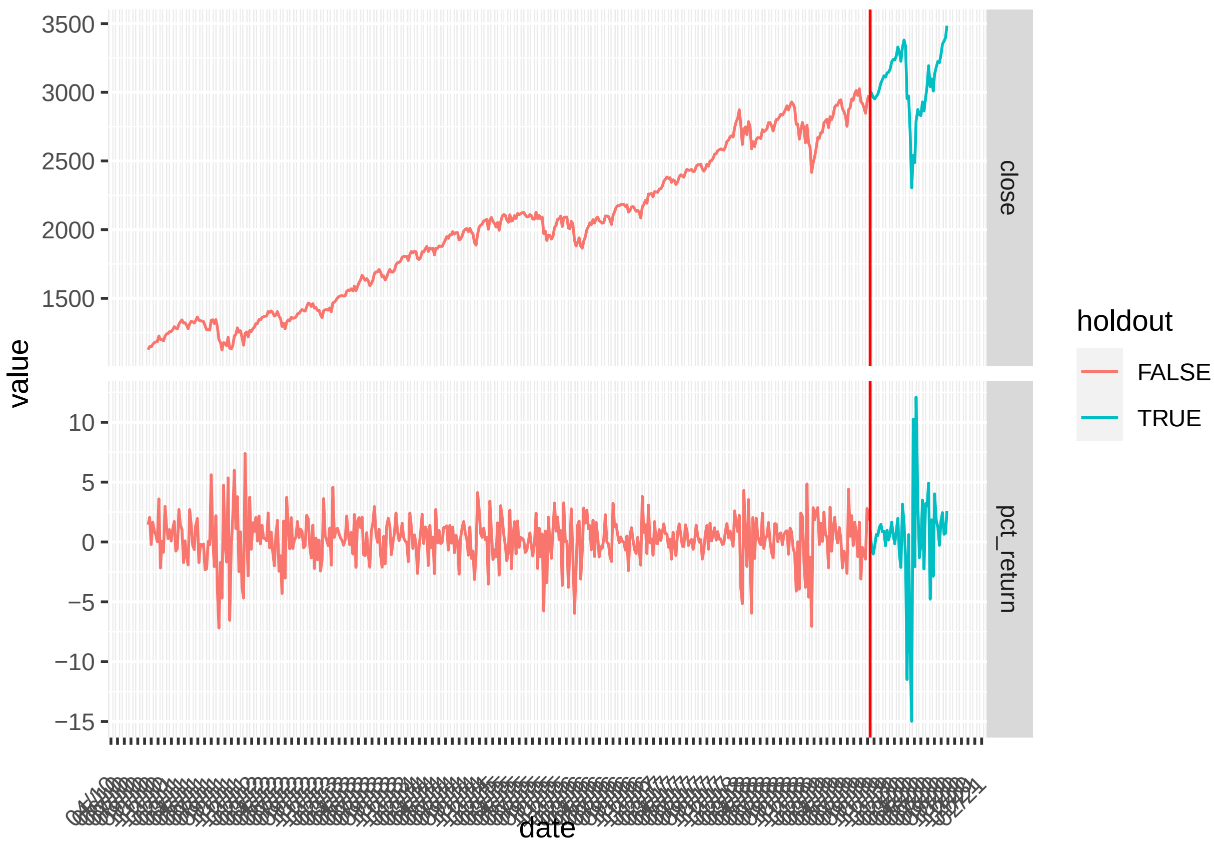
```
## -- Attaching packages --------------------------------------- tidyverse 1.3.0 --
## v ggplot2 3.3.2     v purrr   0.3.4
## v tibble  3.0.4     v dplyr   1.0.2
## v tidyr   1.1.2     v stringr 1.4.0
## v readr   1.4.0     v forcats 0.5.0
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(lubridate)
```

```
##
## Attaching package: 'lubridate'
## The following objects are masked from 'package:base':
##
##     date, intersect, setdiff, union
```

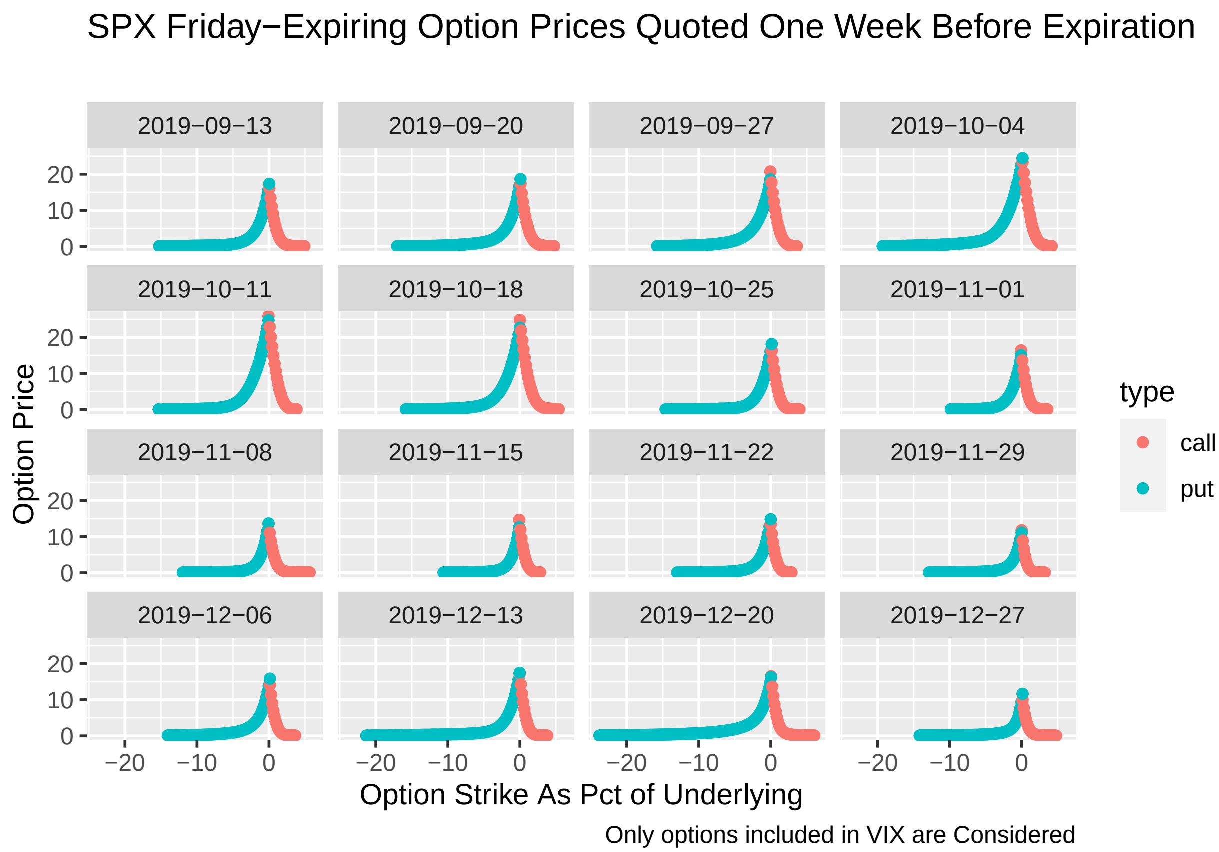
Get Data

SPX



3500
3000
2500
2000
1500
10
5
0
−5
−10
−15
value
date
close
pct_return
holdout
FALSE
TRUE

Options



SPX Friday−Expiring Option Prices Quoted One Week Before Expiration
2019−09−13
2019−09−20
2019−09−27
2019−10−04
2019−10−11
2019−10−18
2019−10−25
2019−11−01
2019−11−08
2019−11−15
2019−11−22
2019−11−29
2019−12−06
2019−12−13
2019−12−20
2019−12−27
Option Price
20
10
0
−20
−10
0
Option Strike As Pct of Underlying
type
call
put
Only options included in VIX are Considered

Refit Model for Every Week