

8. Unsupervised learning

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Libraries

0. Scraping the SP500

In order to test the logic within the strategy, I have fetched functions that retrieve a number of sample stocks by sector from the SP500.

```
# to obtain relative paths
library(here)

# Load code into environment
source(here("functions", "fetch_sp500_sectors.R"))
```

```
## Getting holdings for SP500
```

0.0.1 SP500 Economic Sectors

The following function fetches and extract the economic sectors from the SP500, taken from Wikipedia.

```
# fetch the sectors as a dataframe
sp500_sectors <- f_get_sp500_sectors()
head(sp500_sectors)
```

```
##   tickers      sectors
## 1   MMM      Industrials
## 2   AOS      Industrials
## 3   ABT      Health Care
## 4   ABBV     Health Care
## 5   ACN Information Technology
## 6   ATVI Communication Services
```

0.0.2 SP500 Sector Weight

```
# wrap into a single argument function
fetch_sp500_sector_data <- function(x){f_fetch_sector_data(x, sp500, sp500_sectors)}

# call the function
head(fetch_sp500_sector_data("Information Technology"))
```

```
##   ticker      sector      weight shares_held
## 1  AAPL Information Technology 0.0702540411 162587331
## 2   ACN Information Technology 0.0054092441  6978653
## 3  ADBE Information Technology 0.0064376791  5042633
## 4   ADI Information Technology 0.0023957535  5547304
## 5  ADSK Information Technology 0.0011986744  2364476
## 6  AKAM Information Technology 0.0004527619  1688579
```

0.0.3 Retrieving top sectors and stocks

Pack everything into one function to retrieve all the data

```
# Retrieve top 10 stocks by weight for each sector in the top 5 sectors from the SP500 (by weight)
sector_list <- f_retrieve_top_sp500(top_n_sectors = 6, top_n_stocks = 15, only_tickers=TRUE)
```

```
## Getting holdings for SP500
```

```
sector_list
```

```
## $Industrials
## [1] "ADP" "BA" "CAT" "CSX" "DE" "ETN" "FDX" "GE" "HON" "ITW" "LMT" "NOC"
## [13] "RTX" "UNP" "UPS"
##
## $'Health Care'
## [1] "ABBV" "ABT" "AMGN" "BMY" "DHR" "ELV" "ISRG" "JNJ" "LLY" "MDT"
## [11] "MRK" "PFE" "SYK" "TMO" "UNH"
##
## $'Information Technology'
## [1] "AAPL" "ACN" "ADBE" "AMD" "AVGO" "CRM" "CSCO" "IBM" "INTC" "INTU"
## [11] "MSFT" "NVDA" "ORCL" "QCOM" "TXN"
##
## $'Communication Services'
## [1] "ATVI" "CHTR" "CMCSA" "DIS" "EA" "GOOG" "GOOGL" "META" "NFLX"
## [10] "OMC" "T" "TMUS" "TTWO" "VZ" "WBD"
##
## $Financials
## [1] "AXP" "BAC" "BLK" "BRK-B" "CB" "GS" "JPM" "MA" "MMC"
## [10] "MS" "PGR" "SCHW" "SPGI" "V" "WFC"
##
## $'Consumer Discretionary'
## [1] "ABNB" "AMZN" "AZO" "BKNG" "CMG" "F" "GM" "HD" "MAR" "MCD"
## [11] "NKE" "ORLY" "SBUX" "TJX" "TSLA"
```

This logic is implemented under `functions/fetch_sp500_sectors.R`

0.0.4 Retrieving top sectors and stocks

```
# function to fetch all the information for one ticker into a nice xts dataframe
sp500_stocks <- lapply(sector_list, f_fetch_all_tickers, start_date="2018-01-01", end_date="2022-12-01")

# update format so that it becomes a named list of lists
sp500_stocks <- lapply(sp500_stocks, function(sector_l){
  setNames(sector_l$stock_data, sector_l$tickers)
})

# Show the available sectors
names(sp500_stocks)
```

```
## [1] "Industrials" "Health Care" "Information Technology"
## [4] "Communication Services" "Financials" "Consumer Discretionary"
```

```
# Show available stocks for Industrials
```

```
names(sp500_stocks$Industrials)
```

```
## [1] "ADP" "BA" "CAT" "CSX" "DE" "ETN" "FDX" "GE" "HON" "ITW" "LMT" "NOC"
```

```
## [13] "RTX" "UNP" "UPS"
```

```
# access the xts of the stocks in industrials
```

```
sp500_stocks$Industrials$ADP
```

```
##           date direction_lead adp_adjclose_lead adp_adjclose_lag0
## 2018-01-03 2018-01-03           Up      0.0034056789             NA
## 2018-01-10 2018-01-10           Up      0.0367165163      0.0034056789
## 2018-01-17 2018-01-17         Down     -0.0097978034      0.0367165163
## 2018-01-24 2018-01-24           Up      0.0226601550     -0.0097978034
## 2018-01-31 2018-01-31         Down     -0.0849617732      0.0226601550
## 2018-02-07 2018-02-07         Down     -0.0075129867     -0.0849617732
## 2018-02-14 2018-02-14           Up      0.0296336494     -0.0075129867
## 2018-02-21 2018-02-21         Down     -0.0067410555      0.0296336494
## 2018-02-28 2018-02-28         Down     -0.0012145837     -0.0067410555
## 2018-03-07 2018-03-07           Up      0.0134404536     -0.0012145837
## 2018-03-14 2018-03-14           Up      0.0022366154      0.0134404536
## 2018-03-21 2018-03-21         Down     -0.0403351117      0.0022366154
## 2018-03-28 2018-03-28           Up      0.0434243990     -0.0403351117
## 2018-04-04 2018-04-04         Down     -0.0098150847      0.0434243990
## 2018-04-11 2018-04-11           Up      0.0258778891     -0.0098150847
## 2018-04-18 2018-04-18         Down     -0.0162343808      0.0258778891
## 2018-04-25 2018-04-25           Up      0.0449063696     -0.0162343808
## 2018-05-02 2018-05-02           Up      0.0399891791      0.0449063696
## 2018-05-09 2018-05-09           Up      0.0076845330      0.0399891791
## 2018-05-16 2018-05-16           Up      0.0104126065      0.0076845330
## 2018-05-23 2018-05-23           Up      0.0097698998      0.0104126065
## 2018-05-30 2018-05-30           Up      0.0410207164      0.0097698998
## 2018-06-06 2018-06-06           Up      0.0357611079      0.0410207164
## 2018-06-13 2018-06-13         Down     -0.0183374645      0.0357611079
## 2018-06-20 2018-06-20         Down     -0.0348552433     -0.0183374645
## 2018-06-27 2018-06-27           Up      0.0171362869     -0.0348552433
## 2018-07-11 2018-07-11           Up      0.0156122706      0.0171362869
## 2018-07-18 2018-07-18           Up      0.0119284342      0.0156122706
## 2018-07-25 2018-07-25         Down     -0.0481400150      0.0119284342
## 2018-08-01 2018-08-01           Up      0.0385364255     -0.0481400150
## 2018-08-08 2018-08-08           Up      0.0245114357      0.0385364255
## 2018-08-15 2018-08-15           Up      0.0144799819      0.0245114357
## 2018-08-22 2018-08-22           Up      0.0210608816      0.0144799819
## 2018-08-29 2018-08-29         Down     -0.0014360720      0.0210608816
## 2018-09-05 2018-09-05           Up      0.0067514757     -0.0014360720
## 2018-09-12 2018-09-12           Up      0.0036128152      0.0067514757
## 2018-09-19 2018-09-19           Up      0.0178701662      0.0036128152
## 2018-09-26 2018-09-26           Up      0.0130806553      0.0178701662
## 2018-10-03 2018-10-03         Down     -0.0669029377      0.0130806553
## 2018-10-10 2018-10-10           Up      0.0131732262     -0.0669029377
## 2018-10-17 2018-10-17         Down     -0.0427354438      0.0131732262
## 2018-10-24 2018-10-24           Up      0.0456544931     -0.0427354438
## 2018-10-31 2018-10-31           Up      0.0288686983      0.0456544931
## 2018-11-07 2018-11-07         Down     -0.0383527580      0.0288686983
## 2018-11-14 2018-11-14         Down     -0.0115573787     -0.0383527580
## 2018-11-21 2018-11-21           Up      0.0519981573     -0.0115573787
## 2018-11-28 2018-11-28         Down     -0.0627589107      0.0519981573
## 2018-12-12 2018-12-12         Down     -0.0628203743     -0.0627589107
```

##	2018-12-19	2018-12-19	Down	-0.0203862106	-0.0628203743
##	2018-12-26	2018-12-26	Up	0.0189271017	-0.0203862106
##	2019-01-02	2019-01-02	Up	0.0097875949	0.0189271017
##	2019-01-09	2019-01-09	Up	0.0101444749	0.0097875949
##	2019-01-16	2019-01-16	Up	0.0124262279	0.0101444749
##	2019-01-23	2019-01-23	Up	0.0364502868	0.0124262279
##	2019-01-30	2019-01-30	Up	0.0430315425	0.0364502868
##	2019-02-06	2019-02-06	Up	0.0332465881	0.0430315425
##	2019-02-13	2019-02-13	Up	0.0006640841	0.0332465881
##	2019-02-20	2019-02-20	Up	0.0159457191	0.0006640841
##	2019-02-27	2019-02-27	Down	-0.0029461148	0.0159457191
##	2019-03-06	2019-03-06	Up	0.0072232111	-0.0029461148
##	2019-03-13	2019-03-13	Up	0.0076907571	0.0072232111
##	2019-03-20	2019-03-20	Up	0.0178249980	0.0076907571
##	2019-03-27	2019-03-27	Up	0.0271182831	0.0178249980
##	2019-04-03	2019-04-03	Down	-0.0042301509	0.0271182831
##	2019-04-10	2019-04-10	Up	0.0150342133	-0.0042301509
##	2019-04-17	2019-04-17	Up	0.0039831735	0.0150342133
##	2019-04-24	2019-04-24	Down	-0.0375143517	0.0039831735
##	2019-05-01	2019-05-01	Up	0.0107999086	-0.0375143517
##	2019-05-08	2019-05-08	Up	0.0011301212	0.0107999086
##	2019-05-15	2019-05-15	Up	0.0247888734	0.0011301212
##	2019-05-22	2019-05-22	Down	-0.0216563327	0.0247888734
##	2019-05-29	2019-05-29	Up	0.0172396903	-0.0216563327
##	2019-06-05	2019-06-05	Up	0.0156771465	0.0172396903
##	2019-06-12	2019-06-12	Up	0.0229660748	0.0156771465
##	2019-06-19	2019-06-19	Down	-0.0328057523	0.0229660748
##	2019-06-26	2019-06-26	Up	0.0077697752	-0.0328057523
##	2019-07-03	2019-07-03	Up	0.0027386216	0.0077697752
##	2019-07-10	2019-07-10	Up	0.0051524992	0.0027386216
##	2019-07-17	2019-07-17	Up	0.0109444288	0.0051524992
##	2019-07-24	2019-07-24	Down	-0.0041351243	0.0109444288
##	2019-07-31	2019-07-31	Down	-0.0123873283	-0.0041351243
##	2019-08-07	2019-08-07	Down	-0.0038380945	-0.0123873283
##	2019-08-14	2019-08-14	Up	0.0350832183	-0.0038380945
##	2019-08-21	2019-08-21	Down	-0.0146628530	0.0350832183
##	2019-08-28	2019-08-28	Up	0.0147806394	-0.0146628530
##	2019-09-04	2019-09-04	Down	-0.0518175584	0.0147806394
##	2019-09-11	2019-09-11	Down	-0.0162204826	-0.0518175584
##	2019-09-18	2019-09-18	Up	0.0244806282	-0.0162204826
##	2019-09-25	2019-09-25	Down	-0.0317963577	0.0244806282
##	2019-10-02	2019-10-02	Up	0.0116795938	-0.0317963577
##	2019-10-09	2019-10-09	Up	0.0353392988	0.0116795938
##	2019-10-16	2019-10-16	Down	-0.0254179322	0.0353392988
##	2019-10-23	2019-10-23	Up	0.0253569944	-0.0254179322
##	2019-10-30	2019-10-30	Down	-0.0277342686	0.0253569944
##	2019-11-06	2019-11-06	Up	0.0567339269	-0.0277342686
##	2019-11-13	2019-11-13	Up	0.0094241532	0.0567339269
##	2019-11-20	2019-11-20	Up	0.0052620127	0.0094241532
##	2019-11-27	2019-11-27	Down	-0.0171152412	0.0052620127
##	2019-12-04	2019-12-04	Down	-0.0079210855	-0.0171152412
##	2019-12-11	2019-12-11	Up	0.0073676665	-0.0079210855
##	2019-12-18	2019-12-18	Up	0.0127493023	0.0073676665
##	2020-01-08	2020-01-08	Up	0.0181017432	0.0127493023
##	2020-01-15	2020-01-15	Up	0.0314431678	0.0181017432
##	2020-01-22	2020-01-22	Down	-0.0417387195	0.0314431678
##	2020-01-29	2020-01-29	Up	0.0433637841	-0.0417387195
##	2020-02-05	2020-02-05	Down	-0.0033088409	0.0433637841
##	2020-02-12	2020-02-12	Up	0.0179253053	-0.0033088409
##	2020-02-19	2020-02-19	Down	-0.0859035078	0.0179253053

##	2020-02-26	2020-02-26	Down	-0.0117323219	-0.0859035078
##	2020-03-04	2020-03-04	Down	-0.1049619265	-0.0117323219
##	2020-03-11	2020-03-11	Down	-0.2238234644	-0.1049619265
##	2020-03-18	2020-03-18	Up	0.0415563264	-0.2238234644
##	2020-03-25	2020-03-25	Up	0.0565328911	0.0415563264
##	2020-04-01	2020-04-01	Up	0.0657085479	0.0565328911
##	2020-04-08	2020-04-08	Down	-0.0064452289	0.0657085479
##	2020-04-15	2020-04-15	Up	0.0076717085	-0.0064452289
##	2020-04-22	2020-04-22	Up	0.0501966493	0.0076717085
##	2020-04-29	2020-04-29	Down	-0.0088152514	0.0501966493
##	2020-05-06	2020-05-06	Down	-0.0715358409	-0.0088152514
##	2020-05-13	2020-05-13	Up	0.0014850575	-0.0715358409
##	2020-05-20	2020-05-20	Up	0.0708113814	0.0014850575
##	2020-05-27	2020-05-27	Up	0.0473177188	0.0708113814
##	2020-06-03	2020-06-03	Up	0.0283395041	0.0473177188
##	2020-06-10	2020-06-10	Down	-0.0291051830	0.0283395041
##	2020-06-17	2020-06-17	Down	-0.0395286035	-0.0291051830
##	2020-06-24	2020-06-24	Up	0.0290545567	-0.0395286035
##	2020-07-01	2020-07-01	Down	-0.0067965250	0.0290545567
##	2020-07-08	2020-07-08	Up	0.0033704682	-0.0067965250
##	2020-07-15	2020-07-15	Down	-0.0062104141	0.0033704682
##	2020-07-22	2020-07-22	Down	-0.0741913594	-0.0062104141
##	2020-07-29	2020-07-29	Down	-0.0172867793	-0.0741913594
##	2020-08-05	2020-08-05	Up	0.0350682767	-0.0172867793
##	2020-08-12	2020-08-12	Down	-0.0048837564	0.0350682767
##	2020-08-19	2020-08-19	Up	0.0050987469	-0.0048837564
##	2020-08-26	2020-08-26	Up	0.0203486690	0.0050987469
##	2020-09-02	2020-09-02	Down	-0.0373247945	0.0203486690
##	2020-09-09	2020-09-09	Up	0.0099251275	-0.0373247945
##	2020-09-16	2020-09-16	Down	-0.0675106165	0.0099251275
##	2020-09-23	2020-09-23	Up	0.0803534818	-0.0675106165
##	2020-09-30	2020-09-30	Up	0.0299435110	0.0803534818
##	2020-10-07	2020-10-07	Up	0.0327158375	0.0299435110
##	2020-10-14	2020-10-14	Down	-0.0112405372	0.0327158375
##	2020-10-21	2020-10-21	Up	0.0545293533	-0.0112405372
##	2020-10-28	2020-10-28	Up	0.0594558168	0.0545293533
##	2020-11-04	2020-11-04	Up	0.0433413415	0.0594558168
##	2020-11-11	2020-11-11	Up	0.0074777824	0.0433413415
##	2020-11-18	2020-11-18	Up	0.0052988320	0.0074777824
##	2020-11-25	2020-11-25	Down	-0.0144653441	0.0052988320
##	2020-12-02	2020-12-02	Up	0.0130858622	-0.0144653441
##	2020-12-09	2020-12-09	Up	0.0153802782	0.0130858622
##	2020-12-16	2020-12-16	Down	-0.0022804677	0.0153802782
##	2020-12-23	2020-12-23	Down	-0.0079084799	-0.0022804677
##	2020-12-30	2020-12-30	Down	-0.0345940570	-0.0079084799
##	2021-01-06	2021-01-06	Down	-0.0194859426	-0.0345940570
##	2021-01-13	2021-01-13	Down	-0.0141282264	-0.0194859426
##	2021-01-20	2021-01-20	Up	0.0202434073	-0.0141282264
##	2021-01-27	2021-01-27	Up	0.0069774707	0.0202434073
##	2021-02-03	2021-02-03	Up	0.0006590117	0.0069774707
##	2021-02-10	2021-02-10	Up	0.0011376740	0.0006590117
##	2021-02-17	2021-02-17	Up	0.0552284993	0.0011376740
##	2021-02-24	2021-02-24	Down	-0.0121331016	0.0552284993
##	2021-03-03	2021-03-03	Up	0.0425238439	-0.0121331016
##	2021-03-10	2021-03-10	Up	0.0365333438	0.0425238439
##	2021-03-17	2021-03-17	Down	-0.0139892849	0.0365333438
##	2021-03-24	2021-03-24	Up	0.0171245036	-0.0139892849
##	2021-03-31	2021-03-31	Down	-0.0142141430	0.0171245036
##	2021-04-07	2021-04-07	Up	0.0283337024	-0.0142141430
##	2021-04-14	2021-04-14	Up	0.0163964250	0.0283337024

##	2021-04-21	2021-04-21	Down	-0.0403804497	0.0163964250
##	2021-04-28	2021-04-28	Up	0.0370298464	-0.0403804497
##	2021-05-05	2021-05-05	Down	-0.0220317155	0.0370298464
##	2021-05-12	2021-05-12	Up	0.0073630665	-0.0220317155
##	2021-05-19	2021-05-19	Up	0.0183795002	0.0073630665
##	2021-05-26	2021-05-26	Up	0.0206717669	0.0183795002
##	2021-06-02	2021-06-02	Down	-0.0012606362	0.0206717669
##	2021-06-09	2021-06-09	Down	-0.0001521013	-0.0012606362
##	2021-06-16	2021-06-16	Down	-0.0101921362	-0.0001521013
##	2021-06-23	2021-06-23	Up	0.0172149908	-0.0101921362
##	2021-06-30	2021-06-30	Up	0.0234860856	0.0172149908
##	2021-07-07	2021-07-07	Up	0.0056884391	0.0234860856
##	2021-07-14	2021-07-14	Down	-0.0001465600	0.0056884391
##	2021-07-21	2021-07-21	Up	0.0117176595	-0.0001465600
##	2021-07-28	2021-07-28	Up	0.0244474362	0.0117176595
##	2021-08-04	2021-08-04	Up	0.0198486340	0.0244474362
##	2021-08-11	2021-08-11	Down	-0.0366399125	0.0198486340
##	2021-08-18	2021-08-18	Down	-0.0013439997	-0.0366399125
##	2021-08-25	2021-08-25	Down	-0.0064088410	-0.0013439997
##	2021-09-01	2021-09-01	Down	-0.0083983425	-0.0064088410
##	2021-09-08	2021-09-08	Down	-0.0181859571	-0.0083983425
##	2021-09-15	2021-09-15	Down	-0.0110824952	-0.0181859571
##	2021-09-22	2021-09-22	Up	0.0063836628	-0.0110824952
##	2021-09-29	2021-09-29	Up	0.0267461144	0.0063836628
##	2021-10-06	2021-10-06	Up	0.0009751352	0.0267461144
##	2021-10-13	2021-10-13	Up	0.0375904718	0.0009751352
##	2021-10-20	2021-10-20	Up	0.0409251302	0.0375904718
##	2021-10-27	2021-10-27	Up	0.0169761758	0.0409251302
##	2021-11-03	2021-11-03	Up	0.0170846823	0.0169761758
##	2021-11-10	2021-11-10	Up	0.0310409582	0.0170846823
##	2021-11-17	2021-11-17	Down	-0.0106527324	0.0310409582
##	2021-11-24	2021-11-24	Down	-0.0325238613	-0.0106527324
##	2021-12-01	2021-12-01	Up	0.0322250630	-0.0325238613
##	2021-12-08	2021-12-08	Up	0.0028255252	0.0322250630
##	2021-12-15	2021-12-15	Up	0.0156935089	0.0028255252
##	2021-12-22	2021-12-22	Up	0.0427963113	0.0156935089
##	2021-12-29	2021-12-29	Down	-0.0201606863	0.0427963113
##	2022-01-05	2022-01-05	Down	-0.0352984585	-0.0201606863
##	2022-01-12	2022-01-12	Down	-0.0426652871	-0.0352984585
##	2022-01-19	2022-01-19	Down	-0.1298084847	-0.0426652871
##	2022-01-26	2022-01-26	Up	0.0515210689	-0.1298084847
##	2022-02-02	2022-02-02	Up	0.0155589437	0.0515210689
##	2022-02-09	2022-02-09	Down	-0.0333204010	0.0155589437
##	2022-02-16	2022-02-16	Down	-0.0397026743	-0.0333204010
##	2022-02-23	2022-02-23	Up	0.0496898622	-0.0397026743
##	2022-03-02	2022-03-02	Up	0.0163950987	0.0496898622
##	2022-03-09	2022-03-09	Up	0.0180476240	0.0163950987
##	2022-03-16	2022-03-16	Up	0.0005175584	0.0180476240
##	2022-03-23	2022-03-23	Up	0.0690210965	0.0005175584
##	2022-03-30	2022-03-30	Up	0.0430955088	0.0690210965
##	2022-04-06	2022-04-06	Down	-0.0171785119	0.0430955088
##	2022-04-13	2022-04-13	Down	-0.0048032581	-0.0171785119
##	2022-04-20	2022-04-20	Down	-0.0200605522	-0.0048032581
##	2022-04-27	2022-04-27	Up	0.0038522448	-0.0200605522
##	2022-05-04	2022-05-04	Down	-0.0931149812	0.0038522448
##	2022-05-11	2022-05-11	Down	-0.0001439218	-0.0931149812
##	2022-05-18	2022-05-18	Up	0.0255696273	-0.0001439218
##	2022-05-25	2022-05-25	Up	0.0250232426	0.0255696273
##	2022-06-01	2022-06-01	Up	0.0030502390	0.0250232426
##	2022-06-08	2022-06-08	Down	-0.0554002012	0.0030502390

##	2022-06-15	2022-06-15	Up	0.0012060305	-0.0554002012
##	2022-06-22	2022-06-22	Up	0.0228329086	0.0012060305
##	2022-06-29	2022-06-29	Up	0.0236125975	0.0228329086
##	2022-07-06	2022-07-06	Down	-0.0289048751	0.0236125975
##	2022-07-13	2022-07-13	Up	0.0233200286	-0.0289048751
##	2022-07-20	2022-07-20	Up	0.0799820102	0.0233200286
##	2022-07-27	2022-07-27	Up	0.0429869351	0.0799820102
##	2022-08-03	2022-08-03	Up	0.0328136387	0.0429869351
##	2022-08-10	2022-08-10	Up	0.0320395386	0.0328136387
##	2022-08-17	2022-08-17	Down	-0.0176077831	0.0320395386
##	2022-08-24	2022-08-24	Down	-0.0468771121	-0.0176077831
##	2022-08-31	2022-08-31	Down	-0.0110670319	-0.0468771121
##	2022-09-07	2022-09-07	Down	-0.0260980579	-0.0110670319
##	2022-09-14	2022-09-14	Down	-0.0174664933	-0.0260980579
##	2022-09-21	2022-09-21	Up	0.0066180695	-0.0174664933
##	2022-09-28	2022-09-28	Up	0.0301509783	0.0066180695
##	2022-10-05	2022-10-05	Down	-0.0645357957	0.0301509783
##	2022-10-12	2022-10-12	Up	0.0399309699	-0.0645357957
##	2022-10-19	2022-10-19	Up	0.0081130745	0.0399309699
##	2022-10-26	2022-10-26	Up	0.0097339132	0.0081130745
##	2022-11-02	2022-11-02	Up	0.0123060405	0.0097339132
##	2022-11-09	2022-11-09	Up	0.0536160887	0.0123060405
##	2022-11-16	2022-11-16	Up	0.0347185836	0.0536160887
##	2022-11-23	2022-11-23	Up	0.0059237535	0.0347185836
##	2022-11-30	2022-11-30	<NA>	NA	0.0059237535
##	adp_adjclose_lag1		adp_adjclose_lag2	adp_adjclose_lag3	atr
##	2018-01-03	NA	NA	NA	NA
##	2018-01-10	NA	NA	NA	NA
##	2018-01-17	0.0034056789	NA	NA	NA
##	2018-01-24	0.0367165163	0.0034056789	NA	NA
##	2018-01-31	-0.0097978034	0.0367165163	0.0034056789	NA
##	2018-02-07	0.0226601550	-0.0097978034	0.0367165163	NA
##	2018-02-14	-0.0849617732	0.0226601550	-0.0097978034	NA
##	2018-02-21	-0.0075129867	-0.0849617732	0.0226601550	NA
##	2018-02-28	0.0296336494	-0.0075129867	-0.0849617732	NA
##	2018-03-07	-0.0067410555	0.0296336494	-0.0075129867	NA
##	2018-03-14	-0.0012145837	-0.0067410555	0.0296336494	NA
##	2018-03-21	0.0134404536	-0.0012145837	-0.0067410555	NA
##	2018-03-28	0.0022366154	0.0134404536	-0.0012145837	NA
##	2018-04-04	-0.0403351117	0.0022366154	0.0134404536	NA
##	2018-04-11	0.0434243990	-0.0403351117	0.0022366154	3.947142
##	2018-04-18	-0.0098150847	0.0434243990	-0.0403351117	3.951632
##	2018-04-25	0.0258778891	-0.0098150847	0.0434243990	3.905801
##	2018-05-02	-0.0162343808	0.0258778891	-0.0098150847	4.147529
##	2018-05-09	0.0449063696	-0.0162343808	0.0258778891	4.269849
##	2018-05-16	0.0399891791	0.0449063696	-0.0162343808	4.080575
##	2018-05-23	0.0076845330	0.0399891791	0.0449063696	3.951248
##	2018-05-30	0.0104126065	0.0076845330	0.0399891791	3.861159
##	2018-06-06	0.0097698998	0.0104126065	0.0076845330	3.991791
##	2018-06-13	0.0410207164	0.0097698998	0.0104126065	4.050234
##	2018-06-20	0.0357611079	0.0410207164	0.0097698998	3.949503
##	2018-06-27	-0.0183374645	0.0357611079	0.0410207164	4.014539
##	2018-07-11	-0.0348552433	-0.0183374645	0.0357611079	3.937071
##	2018-07-18	0.0171362869	-0.0348552433	-0.0183374645	3.834423
##	2018-07-25	0.0156122706	0.0171362869	-0.0348552433	3.718393
##	2018-08-01	0.0119284342	0.0156122706	0.0171362869	4.162793
##	2018-08-08	-0.0481400150	0.0119284342	0.0156122706	4.281164
##	2018-08-15	0.0385364255	-0.0481400150	0.0119284342	4.253938
##	2018-08-22	0.0245114357	0.0385364255	-0.0481400150	4.120084
##	2018-08-29	0.0144799819	0.0245114357	0.0385364255	4.067221

## 2018-09-05	0.0210608816	0.0144799819	0.0245114357	3.913134
## 2018-09-12	-0.0014360720	0.0210608816	0.0144799819	3.725766
## 2018-09-19	0.0067514757	-0.0014360720	0.0210608816	3.559641
## 2018-09-26	0.0036128152	0.0067514757	-0.0014360720	3.591809
## 2018-10-03	0.0178701662	0.0036128152	0.0067514757	3.613108
## 2018-10-10	0.0130806553	0.0178701662	0.0036128152	4.070743
## 2018-10-17	-0.0669029377	0.0130806553	0.0178701662	3.947833
## 2018-10-24	0.0131732262	-0.0669029377	0.0130806553	4.122273
## 2018-10-31	-0.0427354438	0.0131732262	-0.0669029377	4.397111
## 2018-11-07	0.0456544931	-0.0427354438	0.0131732262	4.395174
## 2018-11-14	0.0288686983	0.0456544931	-0.0427354438	4.495519
## 2018-11-21	-0.0383527580	0.0288686983	0.0456544931	4.407982
## 2018-11-28	-0.0115573787	-0.0383527580	0.0288686983	4.634555
## 2018-12-12	0.0519981573	-0.0115573787	-0.0383527580	4.957802
## 2018-12-19	-0.0627589107	0.0519981573	-0.0115573787	5.369387
## 2018-12-26	-0.0628203743	-0.0627589107	0.0519981573	5.623717
## 2019-01-02	-0.0203862106	-0.0628203743	-0.0627589107	5.442023
## 2019-01-09	0.0189271017	-0.0203862106	-0.0628203743	5.224021
## 2019-01-16	0.0097875949	0.0189271017	-0.0203862106	5.003020
## 2019-01-23	0.0101444749	0.0097875949	0.0189271017	4.787091
## 2019-01-30	0.0124262279	0.0101444749	0.0097875949	4.900155
## 2019-02-06	0.0364502868	0.0124262279	0.0101444749	5.027287
## 2019-02-13	0.0430315425	0.0364502868	0.0124262279	5.083196
## 2019-02-20	0.0332465881	0.0430315425	0.0364502868	4.808682
## 2019-02-27	0.0006640841	0.0332465881	0.0430315425	4.668062
## 2019-03-06	0.0159457191	0.0006640841	0.0332465881	4.416772
## 2019-03-13	-0.0029461148	0.0159457191	0.0006640841	4.227716
## 2019-03-20	0.0072232111	-0.0029461148	0.0159457191	4.079309
## 2019-03-27	0.0076907571	0.0072232111	-0.0029461148	4.019357
## 2019-04-03	0.0178249980	0.0076907571	0.0072232111	4.136546
## 2019-04-10	0.0271182831	0.0178249980	0.0076907571	3.943222
## 2019-04-17	-0.0042301509	0.0271182831	0.0178249980	3.843706
## 2019-04-24	0.0150342133	-0.0042301509	0.0271182831	3.758441
## 2019-05-01	0.0039831735	0.0150342133	-0.0042301509	4.117838
## 2019-05-08	-0.0375143517	0.0039831735	0.0150342133	4.002278
## 2019-05-15	0.0107999086	-0.0375143517	0.0039831735	3.907115
## 2019-05-22	0.0011301212	0.0107999086	-0.0375143517	3.960893
## 2019-05-29	0.0247888734	0.0011301212	0.0107999086	3.994400
## 2019-06-05	-0.0216563327	0.0247888734	0.0011301212	3.916943
## 2019-06-12	0.0172396903	-0.0216563327	0.0247888734	3.888590
## 2019-06-19	0.0156771465	0.0172396903	-0.0216563327	3.871548
## 2019-06-26	0.0229660748	0.0156771465	0.0172396903	3.990722
## 2019-07-03	-0.0328057523	0.0229660748	0.0156771465	3.894956
## 2019-07-10	0.0077697752	-0.0328057523	0.0229660748	3.762459
## 2019-07-17	0.0027386216	0.0077697752	-0.0328057523	3.622997
## 2019-07-24	0.0051524992	0.0027386216	0.0077697752	3.512783
## 2019-07-31	0.0109444288	0.0051524992	0.0027386216	3.765442
## 2019-08-07	-0.0041351243	0.0109444288	0.0051524992	3.925053
## 2019-08-14	-0.0123873283	-0.0041351243	0.0109444288	3.921120
## 2019-08-21	-0.0038380945	-0.0123873283	-0.0041351243	4.058898
## 2019-08-28	0.0350832183	-0.0038380945	-0.0123873283	4.123977
## 2019-09-04	-0.0146628530	0.0350832183	-0.0038380945	4.034407
## 2019-09-11	0.0147806394	-0.0146628530	0.0350832183	4.411236
## 2019-09-18	-0.0518175584	0.0147806394	-0.0146628530	4.460434
## 2019-09-25	-0.0162204826	-0.0518175584	0.0147806394	4.440402
## 2019-10-02	0.0244806282	-0.0162204826	-0.0518175584	4.566087
## 2019-10-09	-0.0317963577	0.0244806282	-0.0162204826	4.407081
## 2019-10-16	0.0116795938	-0.0317963577	0.0244806282	4.520146
## 2019-10-23	0.0353392988	0.0116795938	-0.0317963577	4.559422
## 2019-10-30	-0.0254179322	0.0353392988	0.0116795938	4.667321

## 2019-11-06	0.0253569944	-0.0254179322	0.0353392988	4.819654
## 2019-11-13	-0.0277342686	0.0253569944	-0.0254179322	5.179679
## 2019-11-20	0.0567339269	-0.0277342686	0.0253569944	4.995416
## 2019-11-27	0.0094241532	0.0567339269	-0.0277342686	4.732886
## 2019-12-04	0.0052620127	0.0094241532	0.0567339269	4.726251
## 2019-12-11	-0.0171152412	0.0052620127	0.0094241532	4.535806
## 2019-12-18	-0.0079210855	-0.0171152412	0.0052620127	4.390391
## 2020-01-08	0.0073676665	-0.0079210855	-0.0171152412	4.287506
## 2020-01-15	0.0127493023	0.0073676665	-0.0079210855	4.322684
## 2020-01-22	0.0181017432	0.0127493023	0.0073676665	4.519635
## 2020-01-29	0.0314431678	0.0181017432	0.0127493023	4.724661
## 2020-02-05	-0.0417387195	0.0314431678	0.0181017432	4.956471
## 2020-02-12	0.0433637841	-0.0417387195	0.0314431678	4.884581
## 2020-02-19	-0.0033088409	0.0433637841	-0.0417387195	4.800683
## 2020-02-26	0.0179253053	-0.0033088409	0.0433637841	5.530635
## 2020-03-04	-0.0859035078	0.0179253053	-0.0033088409	5.815590
## 2020-03-11	-0.0117323219	-0.0859035078	0.0179253053	6.735904
## 2020-03-18	-0.1049619265	-0.0117323219	-0.0859035078	9.461911
## 2020-03-25	-0.2238234644	-0.1049619265	-0.0117323219	9.751060
## 2020-04-01	0.0415563264	-0.2238234644	-0.1049619265	9.827414
## 2020-04-08	0.0565328911	0.0415563264	-0.2238234644	9.831170
## 2020-04-15	0.0657085479	0.0565328911	0.0415563264	9.377516
## 2020-04-22	-0.0064452289	0.0657085479	0.0565328911	9.044122
## 2020-04-29	0.0076717085	-0.0064452289	0.0657085479	8.973828
## 2020-05-06	0.0501966493	0.0076717085	-0.0064452289	8.654269
## 2020-05-13	-0.0088152514	0.0501966493	0.0076717085	8.876106
## 2020-05-20	-0.0715358409	-0.0088152514	0.0501966493	8.392098
## 2020-05-27	0.0014850575	-0.0715358409	-0.0088152514	8.531948
## 2020-06-03	0.0708113814	0.0014850575	-0.0715358409	8.463952
## 2020-06-10	0.0473177188	0.0708113814	0.0014850575	8.325814
## 2020-06-17	0.0283395041	0.0473177188	0.0708113814	8.156113
## 2020-06-24	-0.0291051830	0.0283395041	0.0473177188	8.030676
## 2020-07-01	-0.0395286035	-0.0291051830	0.0283395041	7.857770
## 2020-07-08	0.0290545567	-0.0395286035	-0.0291051830	7.499358
## 2020-07-15	-0.0067965250	0.0290545567	-0.0395286035	7.216547
## 2020-07-22	0.0033704682	-0.0067965250	0.0290545567	6.833937
## 2020-07-29	-0.0062104141	0.0033704682	-0.0067965250	7.226512
## 2020-08-05	-0.0741913594	-0.0062104141	0.0033704682	6.976762
## 2020-08-12	-0.0172867793	-0.0741913594	-0.0062104141	6.871993
## 2020-08-19	0.0350682767	-0.0172867793	-0.0741913594	6.544707
## 2020-08-26	-0.0048837564	0.0350682767	-0.0172867793	6.289371
## 2020-09-02	0.0050987469	-0.0048837564	0.0350682767	6.236559
## 2020-09-09	0.0203486690	0.0050987469	-0.0048837564	6.316805
## 2020-09-16	-0.0373247945	0.0203486690	0.0050987469	6.078461
## 2020-09-23	0.0099251275	-0.0373247945	0.0203486690	6.311429
## 2020-09-30	-0.0675106165	0.0099251275	-0.0373247945	6.735613
## 2020-10-07	0.0803534818	-0.0675106165	0.0099251275	6.606640
## 2020-10-14	0.0299435110	0.0803534818	-0.0675106165	6.650451
## 2020-10-21	0.0327158375	0.0299435110	0.0803534818	6.365418
## 2020-10-28	-0.0112405372	0.0327158375	0.0299435110	6.803603
## 2020-11-04	0.0545293533	-0.0112405372	0.0327158375	7.288345
## 2020-11-11	0.0594558168	0.0545293533	-0.0112405372	7.392749
## 2020-11-18	0.0433413415	0.0594558168	0.0545293533	7.172552
## 2020-11-25	0.0074777824	0.0433413415	0.0594558168	6.913084
## 2020-12-02	0.0052988320	0.0074777824	0.0433413415	6.708578
## 2020-12-09	-0.0144653441	0.0052988320	0.0074777824	6.485822
## 2020-12-16	0.0130858622	-0.0144653441	0.0052988320	6.216121
## 2020-12-23	0.0153802782	0.0130858622	-0.0144653441	6.005683
## 2020-12-30	-0.0022804677	0.0153802782	0.0130858622	5.785991
## 2021-01-06	-0.0079084799	-0.0022804677	0.0153802782	5.928420

## 2021-01-13	-0.0345940570	-0.0079084799	-0.0022804677	5.997818
## 2021-01-20	-0.0194859426	-0.0345940570	-0.0079084799	5.857975
## 2021-01-27	-0.0141282264	-0.0194859426	-0.0345940570	6.190976
## 2021-02-03	0.0202434073	-0.0141282264	-0.0194859426	5.904478
## 2021-02-10	0.0069774707	0.0202434073	-0.0141282264	5.655587
## 2021-02-17	0.0006590117	0.0069774707	0.0202434073	5.459472
## 2021-02-24	0.0011376740	0.0006590117	0.0069774707	5.763796
## 2021-03-03	0.0552284993	0.0011376740	0.0006590117	5.659238
## 2021-03-10	-0.0121331016	0.0552284993	0.0011376740	5.976435
## 2021-03-17	0.0425238439	-0.0121331016	0.0552284993	6.009546
## 2021-03-24	0.0365333438	0.0425238439	-0.0121331016	5.911007
## 2021-03-31	-0.0139892849	0.0365333438	0.0425238439	5.795935
## 2021-04-07	0.0171245036	-0.0139892849	0.0365333438	5.642654
## 2021-04-14	-0.0142141430	0.0171245036	-0.0139892849	5.773893
## 2021-04-21	0.0283337024	-0.0142141430	0.0171245036	5.605043
## 2021-04-28	0.0163964250	0.0283337024	-0.0142141430	5.796112
## 2021-05-05	-0.0403804497	0.0163964250	0.0283337024	5.949962
## 2021-05-12	0.0370298464	-0.0403804497	0.0163964250	5.860678
## 2021-05-19	-0.0220317155	0.0370298464	-0.0403804497	5.777774
## 2021-05-26	0.0073630665	-0.0220317155	0.0370298464	5.745076
## 2021-06-02	0.0183795002	0.0073630665	-0.0220317155	5.702570
## 2021-06-09	0.0206717669	0.0183795002	0.0073630665	5.468101
## 2021-06-16	-0.0012606362	0.0206717669	0.0183795002	5.330380
## 2021-06-23	-0.0001521013	-0.0012606362	0.0206717669	5.126067
## 2021-06-30	-0.0101921362	-0.0001521013	-0.0012606362	5.042062
## 2021-07-07	0.0172149908	-0.0101921362	-0.0001521013	5.034058
## 2021-07-14	0.0234860856	0.0172149908	-0.0101921362	4.822340
## 2021-07-21	0.0056884391	0.0234860856	0.0172149908	4.611460
## 2021-07-28	-0.0001465600	0.0056884391	0.0234860856	4.587784
## 2021-08-04	0.0117176595	-0.0001465600	0.0056884391	4.743656
## 2021-08-11	0.0244474362	0.0117176595	-0.0001465600	4.764823
## 2021-08-18	0.0198486340	0.0244474362	0.0117176595	4.995193
## 2021-08-25	-0.0366399125	0.0198486340	0.0244474362	4.801250
## 2021-09-01	-0.0013439997	-0.0366399125	0.0198486340	4.633304
## 2021-09-08	-0.0064088410	-0.0013439997	-0.0366399125	4.624496
## 2021-09-15	-0.0083983425	-0.0064088410	-0.0013439997	4.736318
## 2021-09-22	-0.0181859571	-0.0083983425	-0.0064088410	4.664439
## 2021-09-29	-0.0110824952	-0.0181859571	-0.0083983425	4.532693
## 2021-10-06	0.0063836628	-0.0110824952	-0.0181859571	4.611072
## 2021-10-13	0.0267461144	0.0063836628	-0.0110824952	4.532424
## 2021-10-20	0.0009751352	0.0267461144	0.0063836628	4.931536
## 2021-10-27	0.0375904718	0.0009751352	0.0267461144	5.415711
## 2021-11-03	0.0409251302	0.0375904718	0.0009751352	5.324589
## 2021-11-10	0.0169761758	0.0409251302	0.0375904718	5.369261
## 2021-11-17	0.0170846823	0.0169761758	0.0409251302	5.522171
## 2021-11-24	0.0310409582	0.0170846823	0.0169761758	5.442730
## 2021-12-01	-0.0106527324	0.0310409582	0.0170846823	5.755392
## 2021-12-08	-0.0325238613	-0.0106527324	0.0310409582	5.971435
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## 2021-12-22	0.0028255252	0.0322250630	-0.0325238613	5.909554
## 2021-12-29	0.0156935089	0.0028255252	0.0322250630	6.297443
## 2022-01-05	0.0427963113	0.0156935089	0.0028255252	6.217626
## 2022-01-12	-0.0201606863	0.0427963113	0.0156935089	6.477080
## 2022-01-19	-0.0352984585	-0.0201606863	0.0427963113	6.721575
## 2022-01-26	-0.0426652871	-0.0352984585	-0.0201606863	8.262178
## 2022-02-02	-0.1298084847	-0.0426652871	-0.0352984585	8.447736
## 2022-02-09	0.0515210689	-0.1298084847	-0.0426652871	8.093613
## 2022-02-16	0.0155589437	0.0515210689	-0.1298084847	8.216927
## 2022-02-23	-0.0333204010	0.0155589437	0.0515210689	8.227146
## 2022-03-02	-0.0397026743	-0.0333204010	0.0155589437	8.428065

##	2022-03-09	0.0496898622	-0.0397026743	-0.0333204010	8.188203
##	2022-03-16	0.0163950987	0.0496898622	-0.0397026743	8.081902
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##	2022-04-06	0.0690210965	0.0005175584	0.0180476240	8.540251
##	2022-04-13	0.0430955088	0.0690210965	0.0005175584	8.359518
##	2022-04-20	-0.0171785119	0.0430955088	0.0690210965	7.951696
##	2022-04-27	-0.0048032581	-0.0171785119	0.0430955088	8.048004
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##	2022-05-11	0.0038522448	-0.0200605522	-0.0048032581	9.051442
##	2022-05-18	-0.0931149812	0.0038522448	-0.0200605522	8.817768
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##	2022-06-01	0.0255696273	-0.0001439218	-0.0931149812	8.785728
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##	2022-06-15	0.0030502390	0.0250232426	0.0255696273	8.956112
##	2022-06-22	-0.0554002012	0.0030502390	0.0250232426	8.730676
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##	2022-08-03	0.0799820102	0.0233200286	-0.0289048751	9.437094
##	2022-08-10	0.0429869351	0.0799820102	0.0233200286	9.525872
##	2022-08-17	0.0328136387	0.0429869351	0.0799820102	9.493310
##	2022-08-24	0.0320395386	0.0328136387	0.0429869351	9.203788
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##	2022-09-14	-0.0110670319	-0.0468771121	-0.0176077831	9.299828
##	2022-09-21	-0.0260980579	-0.0110670319	-0.0468771121	9.117697
##	2022-09-28	-0.0174664933	-0.0260980579	-0.0110670319	8.910004
##	2022-10-05	0.0066180695	-0.0174664933	-0.0260980579	8.929290
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##	2022-10-19	-0.0645357957	0.0301509783	0.0066180695	9.416123
##	2022-10-26	0.0399309699	-0.0645357957	0.0301509783	9.676399
##	2022-11-02	0.0081130745	0.0399309699	-0.0645357957	9.885942
##	2022-11-09	0.0097339132	0.0081130745	0.0399309699	9.762661
##	2022-11-16	0.0123060405	0.0097339132	0.0081130745	10.232471
##	2022-11-23	0.0536160887	0.0123060405	0.0097339132	10.243009
##	2022-11-30	0.0347185836	0.0536160887	0.0123060405	10.247795
##		adx aaron	bb	chaikin_vol	clv
##	2018-01-03	NA NA	NA	NA	NA
##	2018-01-10	NA 50	NA	NA	NA
##	2018-01-17	NA 100	NA	NA	NA
##	2018-01-24	NA 100	NA	NA	NA
##	2018-01-31	NA 100	NA	NA	NA
##	2018-02-07	NA -50	NA	NA	NA
##	2018-02-14	NA -100	NA	NA	NA
##	2018-02-21	NA 50	NA	NA	NA
##	2018-02-28	NA 50	NA	NA	NA
##	2018-03-07	NA -100	NA	NA 0.0961180716	
##	2018-03-14	NA 50	NA	NA -0.0126327645	
##	2018-03-21	NA 50	NA	NA 0.0166670196	
##	2018-03-28	NA -100	NA	NA -0.0786999117	
##	2018-04-04	NA -50	NA	NA 0.0913368631	
##	2018-04-11	NA 50	NA	NA 0.1736944431	
##	2018-04-18	NA 100	NA	NA 0.1448552013	
##	2018-04-25	NA 50	NA	NA 0.2716272194	
##	2018-05-02	NA 50	NA	NA 0.2148892362	
##	2018-05-09	NA 100	NA	NA 0.2015392254	
##	2018-05-16	NA 100	1.067761187	NA 0.2232572273	

##	2018-05-23	NA	100	1.012325537	-5.716811e-02	0.3564731007
##	2018-05-30	NA	100	1.024715550	-1.257365e-02	0.1850084353
##	2018-06-06	NA	100	1.087730138	-3.411396e-01	0.2973142580
##	2018-06-13	NA	100	1.101707575	1.427996e+00	0.3361159768
##	2018-06-20	NA	50	0.972925843	-9.776945e-02	0.1144362923
##	2018-06-27	NA	-100	0.819205577	-7.642129e-01	-0.0735157504
##	2018-07-11	NA	-50	0.815717184	-5.007978e-01	-0.0115243953
##	2018-07-18	32.94000	100	0.836707986	8.998326e+00	0.0378454521
##	2018-07-25	33.32973	100	0.828910586	-2.085245e-01	0.1831639857
##	2018-08-01	31.75866	-50	0.629009792	-1.197053e+00	0.2883440956
##	2018-08-08	31.09066	-50	0.767416798	-2.244011e+00	0.2615296408
##	2018-08-15	30.89298	100	0.817133178	-1.144194e+00	0.3192425953
##	2018-08-22	30.94123	100	0.852756035	-1.327488e+01	0.3535075584
##	2018-08-29	31.34191	100	0.889773697	-7.348877e-01	0.4283487129
##	2018-09-05	31.71398	50	0.864914191	-1.585367e+00	0.5010040574
##	2018-09-12	32.19651	100	0.877456971	-1.774867e+01	0.4769023602
##	2018-09-19	32.71070	100	0.875086106	-3.479801e-04	0.3148684197
##	2018-09-26	33.55403	100	0.939304876	-6.231020e-01	0.2039388300
##	2018-10-03	34.61789	100	0.968273894	-1.455746e-01	0.0269344866
##	2018-10-10	33.19262	-50	0.672831245	-6.699586e+00	-0.1511913882
##	2018-10-17	31.86915	-50	0.600871826	4.437504e-02	-0.0236583064
##	2018-10-24	29.70527	-100	0.405711106	6.090347e-01	-0.1771440136
##	2018-10-31	28.13745	50	0.571700778	5.537999e-01	-0.0624081873
##	2018-11-07	27.13340	100	0.740996120	-1.711147e-01	0.1150835750
##	2018-11-14	25.70771	50	0.571136119	7.753304e-02	-0.0671984408
##	2018-11-21	23.92946	-100	0.415598563	1.751296e-01	-0.0504064069
##	2018-11-28	23.14819	50	0.724350751	4.865623e-02	0.1348406335
##	2018-12-12	21.60545	-50	0.339260235	-9.730377e-02	-0.0577707479
##	2018-12-19	21.54871	-100	-0.074961006	1.269208e-01	-0.1273496286
##	2018-12-26	22.22558	-100	-0.217376197	-6.492397e-01	0.0730632212
##	2019-01-02	22.35835	-50	0.019627210	-1.131601e-01	0.1343496017
##	2019-01-09	22.30328	100	0.107098504	-8.612270e-01	0.2247945879
##	2019-01-16	21.96729	100	0.201421078	-4.524448e+00	0.1977441220
##	2019-01-23	21.46988	100	0.265652010	3.042028e-01	0.3050403150
##	2019-01-30	20.02716	100	0.429497538	-6.330843e-01	0.3445775012
##	2019-02-06	19.22638	100	0.672815494	9.811589e-01	0.3295154158
##	2019-02-13	19.10950	100	0.835494245	4.369190e-01	0.2297541329
##	2019-02-20	18.93205	50	0.822909633	3.177962e-01	0.3258080763
##	2019-02-27	19.08630	50	0.901056234	3.634644e-01	0.3606140214
##	2019-03-06	19.22953	50	0.867474557	3.228843e-01	0.2270629328
##	2019-03-13	19.44715	100	0.844846880	-6.295719e-02	0.1333891452
##	2019-03-20	19.78329	100	0.840106208	-2.201156e-02	0.0542256167
##	2019-03-27	20.39456	100	0.861824605	-1.628963e-01	0.1508936871
##	2019-04-03	21.57479	100	0.939366878	-1.147308e-01	0.0548134379
##	2019-04-10	22.47552	50	0.869864360	4.125115e-01	0.1001814386
##	2019-04-17	23.56271	50	0.872287049	-7.684526e-02	0.2330561907
##	2019-04-24	24.85406	100	0.868719475	-1.741898e-01	0.0124652775
##	2019-05-01	24.11878	-50	0.716299897	-1.119076e+00	-0.0164158904
##	2019-05-08	23.43602	-50	0.716541608	1.043255e+00	0.0491871365
##	2019-05-15	22.70592	0	0.695516547	1.345398e+00	0.1675835605
##	2019-05-22	22.66551	50	0.778040473	-1.398616e-01	0.1855981569
##	2019-05-29	21.94054	50	0.682851515	2.553200e-01	0.1203367023
##	2019-06-05	21.51352	-50	0.721931994	-3.762081e-02	0.2626356956
##	2019-06-12	21.61493	100	0.836999541	-3.261398e-01	0.1807923000
##	2019-06-19	22.07474	100	0.943250103	5.831199e-01	0.2263201053
##	2019-06-26	21.62925	-50	0.753774314	7.827295e-01	0.0147814483
##	2019-07-03	20.97103	-100	0.701639548	-4.666438e-02	0.1815626539
##	2019-07-10	20.44637	-50	0.720780498	-1.220197e+00	0.3018481983
##	2019-07-17	20.20523	100	0.773786787	3.195939e-01	0.2760986953
##	2019-07-24	20.20421	100	0.847502652	5.936672e-01	0.3401857792

##	2019-07-31	20.89922	100	0.884713975	-2.272728e+00	0.1774959931
##	2019-08-07	20.48724	-50	0.565724131	7.127434e-01	0.2535802393
##	2019-08-14	20.44387	-50	0.672602542	2.651574e-02	0.0350519995
##	2019-08-21	20.72022	100	0.962354988	-1.913935e-01	0.2104970905
##	2019-08-28	20.12383	50	0.716164421	-2.869319e-02	0.3185978681
##	2019-09-04	19.99316	50	0.898628755	-6.904540e-01	0.3555845338
##	2019-09-11	18.82043	-50	0.358953439	1.181217e+00	0.1686483912
##	2019-09-18	18.39812	-100	0.019739172	1.204907e-01	0.1792495854
##	2019-09-25	17.45117	-50	0.245404637	2.900797e-01	0.2971083402
##	2019-10-02	17.07423	-50	-0.009610798	5.266935e-01	0.1715215654
##	2019-10-09	16.72421	-50	0.103303467	-1.017096e+00	0.2475624807
##	2019-10-16	15.65544	100	0.471496748	1.679062e+01	0.3402470718
##	2019-10-23	14.90029	50	0.230423649	6.015258e-01	0.3034243576
##	2019-10-30	14.07409	-100	0.398752077	-1.315385e+00	0.4192907262
##	2019-11-06	13.14812	-50	0.209450042	-1.166329e-01	0.4580587495
##	2019-11-13	13.64532	50	0.819534719	1.402398e+00	0.4922110479
##	2019-11-20	14.35603	100	0.901944108	-1.013774e+00	0.4435920849
##	2019-11-27	15.05554	100	0.911265684	5.321944e+01	0.3822798312
##	2019-12-04	14.89531	-50	0.708865052	3.863567e-01	0.4408553794
##	2019-12-11	14.68355	-100	0.665749093	4.914906e-01	0.3263583910
##	2019-12-18	14.70827	50	0.710354921	-1.786033e-01	0.1304738606
##	2020-01-08	14.85259	100	0.757666321	-1.331719e-01	0.1642511004
##	2020-01-15	15.58235	100	0.899503237	-5.189561e-01	0.0882538907
##	2020-01-22	16.94328	100	1.065876337	1.956408e+00	0.0439249918
##	2020-01-29	16.88678	-50	0.765768541	-2.804031e-01	-0.1349932207
##	2020-02-05	17.43699	-50	0.961919004	1.073709e-01	0.0069063846
##	2020-02-12	18.16579	100	0.917694726	-5.768544e-01	-0.0721397575
##	2020-02-19	18.94919	100	0.946931584	-5.746179e-01	0.0078376697
##	2020-02-26	17.89892	-50	0.470069873	-5.378560e+00	-0.1674480380
##	2020-03-04	18.00524	-100	0.238744256	2.856663e+00	0.0341065558
##	2020-03-11	19.06776	-100	-0.149421883	2.948644e-01	-0.0184980416
##	2020-03-18	22.01219	-100	-0.417904288	1.537455e+00	0.0735342893
##	2020-03-25	23.93235	-50	-0.109536570	2.210565e-01	0.0425343132
##	2020-04-01	25.35341	100	0.063423078	-1.140292e-01	-0.0356022989
##	2020-04-08	26.03210	100	0.195485634	-2.311705e-01	0.0329679290
##	2020-04-15	26.55276	100	0.227345195	-9.824647e-02	-0.1067769963
##	2020-04-22	27.15117	-50	0.244938628	-2.198614e-01	0.0133896334
##	2020-04-29	26.95076	50	0.347243252	1.181644e-01	0.1279389293
##	2020-05-06	26.67252	100	0.366147785	-2.847455e-01	0.0384140877
##	2020-05-13	27.05793	-50	0.279245903	-3.106028e-01	-0.0779055158
##	2020-05-20	27.41581	-50	0.283905901	-5.509635e-01	-0.1087630878
##	2020-05-27	26.74580	100	0.398363701	-1.802829e+00	0.0629062615
##	2020-06-03	25.42662	100	0.509625916	7.212997e-01	0.1702851741
##	2020-06-10	23.66524	100	0.594217200	-6.013004e-02	0.1359090859
##	2020-06-17	22.35674	50	0.543287669	-2.988927e-02	0.0155422694
##	2020-06-24	21.61221	-100	0.496793286	-2.537194e-01	-0.1307523315
##	2020-07-01	20.83314	-50	0.575320921	1.951625e-01	-0.1928937017
##	2020-07-08	20.31002	50	0.587100167	1.616052e-01	0.0016193154
##	2020-07-15	19.70070	-100	0.628879707	-5.976402e-02	0.1112380676
##	2020-07-22	19.13490	0	0.649829376	3.845989e-01	0.1433150028
##	2020-07-29	19.59967	-100	0.420412555	-3.471684e-01	0.0427116092
##	2020-08-05	20.09672	-100	0.298693125	1.595350e-02	-0.1215241355
##	2020-08-12	20.27594	-50	0.367763601	7.542202e-02	-0.0757126739
##	2020-08-19	20.48307	100	0.323360411	5.991964e-02	-0.1357864046
##	2020-08-26	20.46947	50	0.358376091	-1.363102e-01	-0.2227868453
##	2020-09-02	20.61783	0	0.386697140	-2.389501e-01	-0.0378088610
##	2020-09-09	20.99972	-50	0.215900883	-3.807813e-01	0.0154527972
##	2020-09-16	21.07410	-50	0.292022149	-4.428277e-01	-0.1020604216
##	2020-09-23	22.00506	-50	0.023967790	-7.919103e-01	-0.2373496661
##	2020-09-30	21.60090	50	0.374154935	-5.826559e+00	-0.1805584926

##	2020-10-07	20.74690	100	0.512114366	-2.418471e+00	-0.0695933818
##	2020-10-14	19.39901	100	0.727566033	1.650010e-01	-0.1800264965
##	2020-10-21	18.14540	50	0.651577473	-3.324114e-01	-0.1653125143
##	2020-10-28	17.94394	50	1.023197953	-2.169600e+00	-0.2373001223
##	2020-11-04	18.54592	100	1.204471593	9.682783e-01	-0.3208995018
##	2020-11-11	19.45011	100	1.178048235	-9.765772e-01	-0.2724004735
##	2020-11-18	20.49334	100	1.091781205	-1.354848e+00	-0.3738373224
##	2020-11-25	21.50011	100	1.009877290	-9.483004e+00	-0.4145139170
##	2020-12-02	22.06243	-50	0.912147284	-1.957000e+00	-0.4697868619
##	2020-12-09	22.59419	-50	0.886414812	2.791463e+00	-0.4040688284
##	2020-12-16	23.21405	100	0.865365997	2.370908e-02	-0.3025689144
##	2020-12-23	23.94838	100	0.836942952	-5.344521e-01	-0.4071340748
##	2020-12-30	24.31663	-50	0.780672802	-1.807247e+00	-0.4541160321
##	2021-01-06	23.42366	-100	0.660367921	-5.561435e+00	-0.3539549078
##	2021-01-13	21.87166	-100	0.582481254	-1.652853e-01	-0.1876415900
##	2021-01-20	20.37743	-100	0.537694350	2.295893e-01	-0.0506856562
##	2021-01-27	20.20797	50	0.602653066	-3.985130e+00	-0.1140913968
##	2021-02-03	20.05061	50	0.582044188	-4.824791e-01	-0.1433475932
##	2021-02-10	19.99734	0	0.563662548	-7.717656e-01	-0.1939188831
##	2021-02-17	19.64974	-50	0.514993800	6.961788e-01	-0.0143296314
##	2021-02-24	20.36389	50	0.707847895	5.521700e+00	0.1594255406
##	2021-03-03	21.02703	50	0.687686346	-2.639267e-01	0.2334921506
##	2021-03-10	22.48054	100	1.018918429	-8.649232e-02	0.0968446143
##	2021-03-17	24.11905	100	1.135913593	-3.461337e-01	0.1777502714
##	2021-03-24	25.17971	50	0.978726975	-2.657493e-01	0.1175509993
##	2021-03-31	26.29890	50	0.995505079	2.210461e-02	0.1192655018
##	2021-04-07	27.05168	50	0.895191952	-2.610017e+00	-0.0643123072
##	2021-04-14	28.10727	50	0.969612473	-3.056923e-01	-0.1701026465
##	2021-04-21	29.19601	100	0.957693253	1.915887e-01	-0.0156318602
##	2021-04-28	28.83753	-50	0.777398667	-9.556339e-01	-0.1553859341
##	2021-05-05	28.82774	50	0.848786342	1.465200e+01	-0.0081070649
##	2021-05-12	28.75371	50	0.778121369	-8.577234e-01	-0.1505892224
##	2021-05-19	28.35615	-100	0.740829623	-4.151488e+00	-0.0303665141
##	2021-05-26	28.47153	50	0.811629866	-3.195621e-01	-0.0958681247
##	2021-06-02	28.93570	100	0.853618228	-2.581046e+00	-0.0332963192
##	2021-06-09	29.46827	100	0.843727578	-3.400441e-02	-0.1940334003
##	2021-06-16	29.49910	-50	0.787324336	-7.776731e-02	-0.2152519525
##	2021-06-23	29.25045	-100	0.715428208	1.095683e+00	-0.2416685226
##	2021-06-30	29.39258	-50	0.779148543	-2.244171e-01	-0.1296738717
##	2021-07-07	30.02167	100	0.903103071	1.551233e+00	0.0471198308
##	2021-07-14	30.80153	100	0.944403796	6.412144e-01	-0.0017159425
##	2021-07-21	31.22727	50	0.920135872	1.692713e-01	0.1551338863
##	2021-07-28	31.94864	50	0.950577218	-1.594079e-01	0.2560700111
##	2021-08-04	33.21157	100	1.086924681	2.234190e-04	0.0445096263
##	2021-08-11	34.66311	100	1.089036858	-3.966338e-02	0.0888333008
##	2021-08-18	34.48612	-50	0.861651626	-6.877774e-01	-0.0957623118
##	2021-08-25	34.03547	-100	0.769095049	4.967168e-01	-0.0528320433
##	2021-09-01	33.37273	-100	0.702813987	-2.036240e-01	0.0063602730
##	2021-09-08	32.06149	-100	0.608100848	-7.353276e-01	0.1695874864
##	2021-09-15	30.20318	-100	0.448106840	1.342219e+00	0.2515747134
##	2021-09-22	28.09665	-100	0.358612931	-8.121428e-01	0.2741184561
##	2021-09-29	26.43183	-50	0.384518682	-5.367536e+00	0.2616741890
##	2021-10-06	25.60006	100	0.550235359	-1.622339e+00	0.3698565312
##	2021-10-13	24.91050	100	0.543986447	-3.530228e+00	0.4253767415
##	2021-10-20	25.48771	100	0.920529870	2.986926e-01	0.2373921680
##	2021-10-27	26.87421	100	1.134904444	-1.059796e+00	0.1339114079
##	2021-11-03	28.26491	100	1.085222877	-1.425392e+01	0.2599227067
##	2021-11-10	29.96426	100	1.114828296	9.767023e-01	0.1695303800
##	2021-11-17	31.88541	100	1.123342927	2.769189e-02	0.2928690364
##	2021-11-24	33.42412	50	0.992801567	3.588509e-01	0.2652813658

##	2021-12-01	33.29916	-100	0.816386878	1.325835e+00	0.1450784223		
##	2021-12-08	33.48500	-50	0.894469950	-1.254339e-01	0.1582270581		
##	2021-12-15	33.15555	50	0.824346773	-6.826569e-03	0.3003520425		
##	2021-12-22	33.19790	50	0.846572280	8.729181e-02	0.4192150333		
##	2021-12-29	34.10157	100	0.978763525	-1.943745e-02	0.4437188276		
##	2022-01-05	34.60943	50	0.877017894	-3.072552e-01	0.2040755134		
##	2022-01-12	33.57030	-100	0.705335037	-3.652984e-01	0.1619894374		
##	2022-01-19	31.53783	-100	0.559387408	1.255064e-01	-0.0415767409		
##	2022-01-26	31.23430	-100	0.152907641	1.407624e+00	-0.1873146266		
##	2022-02-02	30.94709	-50	0.242182574	-2.015465e-01	-0.0207075802		
##	2022-02-09	30.34006	100	0.276970330	-7.966062e-01	0.1254251432		
##	2022-02-16	30.29908	-50	0.143888358	2.556520e-02	0.1918946648		
##	2022-02-23	30.58908	-100	0.065887216	3.994405e-01	-0.0007672036		
##	2022-03-02	30.24973	50	0.187401343	-5.037570e-01	0.1071816870		
##	2022-03-09	29.51015	100	0.258147324	2.504598e-01	0.1662306185		
##	2022-03-16	28.44952	100	0.315183617	1.162932e+00	0.2038499198		
##	2022-03-23	27.32846	100	0.358808182	-4.620518e-02	-0.0040782866		
##	2022-03-30	25.72463	100	0.573186630	4.516112e-02	0.1314802186		
##	2022-04-06	25.06603	100	0.756024306	-1.640232e+00	0.1645466941		
##	2022-04-13	24.09604	50	0.687908703	7.718534e-02	0.2510242772		
##	2022-04-20	23.12516	-100	0.667062444	-5.988545e-02	0.2976360207		
##	2022-04-27	21.47575	-100	0.603952561	-1.783267e+00	0.2384374007		
##	2022-05-04	20.23070	-100	0.578518080	8.028204e-01	0.3553488622		
##	2022-05-11	20.08887	-100	0.325934782	3.214480e-02	0.1530690618		
##	2022-05-18	19.95718	-50	0.341940029	-5.618561e-02	-0.0125410353		
##	2022-05-25	19.70737	100	0.425957088	-8.559401e-01	0.0849769336		
##	2022-06-01	18.42089	100	0.605207967	3.263669e+00	-0.0877121537		
##	2022-06-08	17.25970	50	0.594858675	-1.039767e+00	-0.0948429553		
##	2022-06-15	17.43368	-100	0.287469660	-2.336165e+01	-0.0635700198		
##	2022-06-22	17.59523	-50	0.289268316	1.286916e+00	-0.0194101811		
##	2022-06-29	17.09090	100	0.416663222	6.013533e-01	-0.0655864098		
##	2022-07-06	16.29551	100	0.489335382	-7.218325e-01	0.0224553112		
##	2022-07-13	16.02851	-50	0.321737324	-1.567226e+00	0.0547363879		
##	2022-07-20	15.14353	50	0.457675395	7.844265e-01	-0.0215930899		
##	2022-07-27	15.14639	100	0.770435728	-3.249667e+00	0.1494699358		
##	2022-08-03	15.87503	100	1.041663596	1.931054e-01	0.2216172740		
##	2022-08-10	17.08805	100	1.107487975	-4.039318e-01	0.1325653936		
##	2022-08-17	18.54959	100	1.101164622	-3.568703e-02	0.2046597877		
##	2022-08-24	19.61279	50	0.978071621	-1.147863e+00	0.1404834902		
##	2022-08-31	19.42562	-100	0.792402936	1.218127e+00	-0.0023484227		
##	2022-09-07	18.65299	-100	0.705813283	-1.742474e-01	0.1418264506		
##	2022-09-14	17.58902	-100	0.616876006	8.782412e-01	0.0986168191		
##	2022-09-21	16.40723	-100	0.582639083	-9.070821e-01	-0.0968218305		
##	2022-09-28	15.43368	-50	0.542023609	-8.361353e+00	0.0212065976		
##	2022-10-05	14.79323	50	0.633394422	-4.443695e+00	0.0923379459		
##	2022-10-12	14.11794	-50	0.423828013	1.399163e-01	-0.0966436593		
##	2022-10-19	13.28942	-50	0.531205742	-1.119344e-01	0.0157301449		
##	2022-10-26	13.39493	100	0.611078370	-1.497503e+00	-0.1320575730		
##	2022-11-02	13.58997	100	0.630333452	2.903146e+00	-0.2863719303		
##	2022-11-09	13.77107	50	0.630778256	-9.676625e-02	-0.3920529091		
##	2022-11-16	14.68326	100	0.832574004	-3.839710e-01	-0.4461119195		
##	2022-11-23	15.95273	100	0.931032474	-2.018052e-01	-0.3205141759		
##	2022-11-30	16.53998	100	0.890733576	4.839489e-01	-0.1089894770		
##		emv		macd	mfi	sar	smi	volat
##	2018-01-03	NA		NA	NA	115.3586	NA	NA
##	2018-01-10	NA		NA	NA	115.4054	NA	NA
##	2018-01-17	NA		NA	NA	115.5252	NA	NA
##	2018-01-24	NA		NA	NA	115.9245	NA	NA
##	2018-01-31	NA		NA	NA	116.4665	NA	NA
##	2018-02-07	NA		NA	NA	125.2400	NA	NA

##	2018-02-14	NA	NA	NA	125.2400	NA	NA
##	2018-02-21	NA	NA	NA	124.7388	NA	NA
##	2018-02-28	NA	NA	NA	124.2576	NA	NA
##	2018-03-07	-0.0058799185	NA	NA	123.7957	NA	0.2378317
##	2018-03-14	-0.0034865570	NA	NA	123.3523	NA	0.2396534
##	2018-03-21	-0.0081262406	NA	NA	122.9266	NA	0.2438210
##	2018-03-28	-0.0126815488	NA	NA	122.5180	NA	0.2438491
##	2018-04-04	-0.0128995939	NA	NA	121.8725	NA	0.2588964
##	2018-04-11	0.0028534823	NA	58.92945	121.2657	NA	0.2347659
##	2018-04-18	0.0114631965	NA	58.91397	120.6954	NA	0.2102715
##	2018-04-25	-0.0002943706	NA	53.68865	120.1593	NA	0.1961045
##	2018-05-02	0.0050307541	NA	58.56474	111.7600	NA	0.2072958
##	2018-05-09	0.0109576476	NA	58.26464	111.7600	NA	0.2096722
##	2018-05-16	0.0087410904	NA	63.99454	112.4064	NA	0.2071152
##	2018-05-23	0.0098220310	NA	68.19637	113.3762	NA	0.2009671
##	2018-05-30	0.0160966161	NA	68.45782	114.6589	NA	0.1984168
##	2018-06-06	0.0177771758	NA	73.83002	116.3980	NA	0.1955207
##	2018-06-13	0.0213303861	NA	78.28046	118.7887	NA	0.1803464
##	2018-06-20	0.0164002933	NA	73.31097	121.8857	NA	0.1788406
##	2018-06-27	0.0115290952	NA	76.35607	124.5491	49.8074218	0.1828804
##	2018-07-11	0.0073242512	NA	82.23203	126.8396	50.4150412	0.1822324
##	2018-07-18	0.0048726586	NA	79.45415	128.8095	52.7203529	0.1499739
##	2018-07-25	0.0053170146	NA	83.30596	130.5035	56.2869360	0.1467714
##	2018-08-01	-0.0030635571	NA	72.92171	131.9604	54.7736165	0.1667054
##	2018-08-08	0.0016151041	NA	77.06434	132.6100	54.5330607	0.1653636
##	2018-08-15	0.0019154021	NA	75.06510	133.7720	56.3441879	0.1662480
##	2018-08-22	0.0004694374	NA	73.87555	135.0437	59.0402197	0.1629357
##	2018-08-29	0.0047588354	5.85397763	74.67040	136.5874	61.9693243	0.1629302
##	2018-09-05	0.0123150419	5.84309826	68.37961	138.6059	64.6497855	0.1650939
##	2018-09-12	0.0130281368	5.83770168	68.14414	140.2207	67.3235101	0.1513876
##	2018-09-19	0.0123150585	5.81952076	66.13959	141.8068	69.4366915	0.1481179
##	2018-09-26	0.0145167999	5.80971226	64.77485	143.2836	71.2814361	0.1538378
##	2018-10-03	0.0263231222	5.81291273	71.37037	145.2846	72.7624017	0.1561483
##	2018-10-10	-0.0036954249	5.70075045	68.70481	153.5100	68.2912798	0.1754848
##	2018-10-17	-0.0135425417	5.53021104	63.44545	153.5100	63.6001122	0.1796058
##	2018-10-24	-0.0242868520	5.25231955	55.10719	153.0408	55.9250729	0.2041302
##	2018-10-31	-0.0227164933	4.98191465	58.39630	152.1173	50.4393723	0.2396180
##	2018-11-07	-0.0170376789	4.76592082	70.29447	151.2493	48.0882686	0.2410186
##	2018-11-14	-0.0225212242	4.52199180	63.35178	150.4333	43.6843293	0.2469845
##	2018-11-21	-0.0309551325	4.24478528	57.30334	149.6663	37.8828055	0.2588357
##	2018-11-28	-0.0278413757	4.03549117	60.03102	148.9454	36.1492447	0.2620686
##	2018-12-12	-0.0403709013	3.76973991	51.88967	148.6600	30.5984937	0.2618763
##	2018-12-19	-0.0340813763	3.37005016	49.89023	147.9994	20.6790586	0.2948417
##	2018-12-26	-0.0488082933	2.86840725	44.27331	146.5859	10.7594460	0.3069959
##	2019-01-02	-0.0349911888	2.34938761	45.55601	144.6973	3.3228192	0.3075128
##	2019-01-09	-0.0383175946	1.85553191	45.35874	142.9975	-1.2545483	0.2944110
##	2019-01-16	-0.0422427950	1.41441013	46.05014	141.4678	-3.5879596	0.2686413
##	2019-01-23	-0.0368050514	1.04555251	53.27768	140.0910	-4.3283621	0.2661614
##	2019-01-30	-0.0214382529	0.79738109	59.87509	127.7000	-2.2488281	0.2928734
##	2019-02-06	-0.0221234017	0.70713083	66.23718	127.7000	3.2819103	0.2836786
##	2019-02-13	-0.0098090457	0.77449709	64.92148	128.4356	10.9602023	0.2810487
##	2019-02-20	0.0057858576	0.93483180	58.47509	129.8105	18.6780083	0.2785103
##	2019-02-27	0.0300648950	1.16861740	64.82967	131.1028	26.2888812	0.2407584
##	2019-03-06	0.0246119479	1.42700983	64.26444	132.8866	33.0467681	0.1925054
##	2019-03-13	0.0236625905	1.68631937	62.32939	134.5277	38.9851290	0.1890056
##	2019-03-20	0.0227731965	1.94067032	70.40320	136.4729	44.3981395	0.1806320
##	2019-03-27	0.0248929235	2.20305172	80.23925	138.6950	48.9324544	0.1821178
##	2019-04-03	0.0260340458	2.49628822	87.34675	141.2941	53.0034277	0.1785695
##	2019-04-10	0.0184239163	2.77873239	82.69983	144.6790	56.1781323	0.1128390
##	2019-04-17	0.0171946583	3.05721801	82.44281	147.5224	59.5829308	0.1116332

##	2019-04-24	0.0204710081	3.31679233	82.51102	150.3029	62.1596679	0.1103162
##	2019-05-01	0.0031465398	3.48037296	70.56897	153.3424	61.4252008	0.1683192
##	2019-05-08	0.0045363880	3.58460748	68.25242	155.7739	59.9520396	0.1715197
##	2019-05-15	0.0035953136	3.63953265	59.83386	157.7191	58.3171680	0.1766938
##	2019-05-22	0.0111808422	3.69272108	58.24628	159.2753	58.0911351	0.1757646
##	2019-05-29	0.0006551732	3.69757523	59.50637	159.8700	56.8133002	0.1781555
##	2019-06-05	-0.0049918151	3.69131000	59.61094	159.8700	56.4004323	0.1736136
##	2019-06-12	0.0030683449	3.69532497	66.00135	160.9960	57.0882877	0.1736076
##	2019-06-19	0.0053551689	3.72660867	65.58529	162.1343	58.4479481	0.1780375
##	2019-06-26	-0.0076243946	3.71023632	58.32538	162.8200	57.3929379	0.1829088
##	2019-07-03	0.0040730406	3.66882436	50.08347	162.8200	56.1774145	0.1887240
##	2019-07-10	0.0035969076	3.60976264	50.97254	164.0900	55.1611655	0.1434100
##	2019-07-17	0.0057604197	3.54266453	57.43927	164.5400	54.6744768	0.1392016
##	2019-07-24	-0.0016394326	3.48356079	59.22054	165.3900	55.3401441	0.1331613
##	2019-07-31	0.0088875176	3.41755039	63.20159	166.2252	54.3889480	0.1690267
##	2019-08-07	-0.0080229409	3.32271377	65.97730	172.0000	51.8122997	0.1899008
##	2019-08-14	-0.0092886057	3.20103318	67.12175	172.0000	48.1726524	0.1988312
##	2019-08-21	-0.0105141091	3.11845971	74.20873	171.6736	47.6210789	0.1970221
##	2019-08-28	-0.0062968812	3.03331469	68.48722	171.3603	46.4656719	0.1991355
##	2019-09-04	0.0002847952	2.96798068	72.96750	171.0594	46.5641674	0.1939012
##	2019-09-11	-0.0133262091	2.82885787	64.32459	170.7707	41.8008660	0.2076364
##	2019-09-18	-0.0245318313	2.61155716	59.02036	170.1928	34.3040523	0.2125157
##	2019-09-25	-0.0213591918	2.38871915	60.65939	169.1990	28.7825198	0.2188163
##	2019-10-02	-0.0292961898	2.11908174	58.02920	168.2847	21.1171511	0.2284379
##	2019-10-09	-0.0145628743	1.84733301	64.13307	167.1182	14.3521832	0.2062337
##	2019-10-16	-0.0110237612	1.64043808	64.04401	166.0684	11.7926641	0.1891350
##	2019-10-23	-0.0184796718	1.44070883	58.01463	165.1236	8.0787308	0.1799721
##	2019-10-30	-0.0093332865	1.29314502	59.06898	164.3300	7.4185151	0.1981927
##	2019-11-06	-0.0171898946	1.13883313	48.28246	164.3300	4.8878498	0.1977439
##	2019-11-13	0.0087902542	1.07743904	56.41701	156.6200	7.8261962	0.2032397
##	2019-11-20	0.0234385554	1.09020158	54.99104	156.6200	12.8469809	0.1891523
##	2019-11-27	0.0202051342	1.15448629	54.76994	157.2184	18.7015121	0.1791373
##	2019-12-04	0.0206133241	1.21657560	54.05446	158.0993	22.6352295	0.1711257
##	2019-12-11	0.0192556257	1.25833699	49.12587	158.9273	24.9206198	0.1592214
##	2019-12-18	0.0119392726	1.28532925	58.06426	159.7057	26.7828430	0.1592537
##	2020-01-08	0.0168694618	1.31927770	64.37903	160.4374	29.7832127	0.1575659
##	2020-01-15	0.0190245235	1.38221204	64.26554	161.1251	33.6067813	0.1630110
##	2020-01-22	0.0305860944	1.50868991	73.58812	162.1943	38.4139078	0.1488538
##	2020-01-29	0.0114092436	1.59550671	61.76185	163.9639	38.6742712	0.1547484
##	2020-02-05	0.0111397841	1.72025608	63.35883	165.5565	42.0738922	0.1518349
##	2020-02-12	0.0116658304	1.85207856	70.11731	166.9898	45.3606469	0.1620880
##	2020-02-19	0.0181720099	2.00636974	69.09950	168.6531	48.4621406	0.1633940
##	2020-02-26	-0.0083664484	2.02392272	68.42852	181.7400	42.8215125	0.1804460
##	2020-03-04	-0.0335864177	1.93202815	59.73224	181.7400	35.3025763	0.2196953
##	2020-03-11	-0.0648662431	1.61686855	53.38799	181.0460	21.2968998	0.2593071
##	2020-03-18	-0.2225679313	0.87262828	46.30024	179.0638	2.6695352	0.6684629
##	2020-03-25	-0.1908289357	-0.07023426	53.28126	174.1467	-9.5999263	0.7734127
##	2020-04-01	-0.1698330179	-1.02453077	58.10030	169.6230	-15.4287570	0.7852909
##	2020-04-08	-0.1651070397	-1.84545544	58.29968	165.4612	-16.1665929	0.7868318
##	2020-04-15	-0.1650195727	-2.54721277	58.39190	161.6323	-15.9192181	0.7886954
##	2020-04-22	-0.1723202650	-3.12205320	53.66085	158.1097	-15.2143151	0.7931613
##	2020-04-29	-0.1303562910	-3.50339254	53.77939	154.8689	-12.8102301	0.8028579
##	2020-05-06	-0.1032161443	-3.74948034	62.44615	151.8874	-10.5674866	0.8056244
##	2020-05-13	-0.1004140683	-3.99903125	54.47068	149.1444	-10.7290290	0.8125326
##	2020-05-20	0.0509725521	-4.22822112	43.63864	146.6209	-10.4782351	0.8011045
##	2020-05-27	0.0245575163	-4.31401582	45.49358	145.1300	-7.6122884	0.5238866
##	2020-06-03	0.0236822251	-4.21799591	51.52708	117.6000	-1.6237563	0.3533343
##	2020-06-10	0.0294405165	-3.95595895	58.05208	117.6000	5.2996983	0.3344808
##	2020-06-17	0.0170745322	-3.65320594	60.45427	119.2244	9.8724320	0.3285830
##	2020-06-24	0.0080639810	-3.39580532	64.22670	120.7838	11.3681128	0.3352688

##	2020-07-01	-0.0028334271	-3.12628167	62.14404	122.2809	12.3114354	0.3178972
##	2020-07-08	-0.0100528208	-2.86708236	56.44677	123.7180	12.8477517	0.2941486
##	2020-07-15	0.0177828962	-2.61598090	55.18932	125.0977	13.3560646	0.2815448
##	2020-07-22	0.0186439068	-2.38708824	50.05421	126.4222	13.6357189	0.2286290
##	2020-07-29	-0.0061577447	-2.29345622	44.81512	127.6937	11.2785645	0.2635587
##	2020-08-05	-0.0240158413	-2.31137468	37.38219	128.9144	7.4663431	0.2507700
##	2020-08-12	-0.0372783985	-2.34089279	38.87204	130.0862	4.3044876	0.2443506
##	2020-08-19	-0.0268041253	-2.37873648	40.51403	131.2111	1.1505712	0.2327890
##	2020-08-26	-0.0107668567	-2.40680651	51.18622	132.2911	-1.7668444	0.2349184
##	2020-09-02	-0.0151222293	-2.38984623	49.01592	133.3279	-3.7530341	0.2382594
##	2020-09-09	-0.0179363707	-2.39867817	41.64942	134.3231	-6.1404927	0.2504850
##	2020-09-16	-0.0146114039	-2.41308248	40.83848	135.2786	-8.2330912	0.2588868
##	2020-09-23	-0.0395564906	-2.52739420	40.58919	158.2100	-11.9886267	0.2664298
##	2020-09-30	-0.0170688445	-2.57060155	49.05776	158.2100	-12.5990623	0.2746831
##	2020-10-07	-0.0093418116	-2.51272999	50.75814	157.0304	-10.7401102	0.2424355
##	2020-10-14	-0.0023596892	-2.33475364	56.75170	155.8980	-6.7313937	0.2341242
##	2020-10-21	-0.0074939269	-2.10455537	51.97341	154.8109	-2.6965973	0.2373076
##	2020-10-28	0.0030419062	-1.75755010	60.96690	128.7200	2.6136709	0.2629956
##	2020-11-04	0.0244228148	-1.24936281	74.13712	128.7200	9.5240993	0.2682990
##	2020-11-11	0.0406923783	-0.59025433	81.14972	130.3180	17.7994031	0.2538285
##	2020-11-18	0.0438462407	0.13804146	80.53374	132.8987	25.4888990	0.2413250
##	2020-11-25	0.0710015402	0.87582391	85.04955	136.3612	32.4251634	0.2335786
##	2020-12-02	0.0562893907	1.54996056	76.52042	140.3951	37.7526223	0.2242537
##	2020-12-09	0.0536505097	2.16538887	76.27863	144.0256	42.8085527	0.2158871
##	2020-12-16	0.0478582626	2.72155978	82.00375	147.2930	47.8487424	0.2123720
##	2020-12-23	0.0578852061	3.19914191	81.81903	150.2337	51.4124150	0.2095138
##	2020-12-30	0.0378372422	3.58031025	83.21126	153.5969	53.6947170	0.2086399
##	2021-01-06	0.0007707311	3.81554608	76.07042	156.5565	53.6051450	0.1786629
##	2021-01-13	-0.0161064993	3.90719464	65.07964	159.1609	51.8740692	0.1816754
##	2021-01-20	-0.0260134075	3.87300956	58.70806	161.4528	48.4575259	0.1789656
##	2021-01-27	-0.0087343849	3.78499947	66.14887	162.3500	44.9752275	0.2756788
##	2021-02-03	-0.0055436364	3.67040524	55.46425	164.2592	41.8146044	0.2735836
##	2021-02-10	-0.0064985764	3.53779460	53.91063	165.9393	38.8054166	0.2699993
##	2021-02-17	-0.0135055801	3.39455619	47.39138	166.9400	35.9264012	0.2704929
##	2021-02-24	0.0125499090	3.33504289	48.84039	167.1300	36.3411791	0.2890362
##	2021-03-03	0.0215457968	3.30230080	43.44714	168.4656	37.1255385	0.2894876
##	2021-03-10	0.0550611741	3.35104696	52.58466	169.6409	39.1762271	0.2909792
##	2021-03-17	0.0688145959	3.49260668	53.74342	171.7338	42.6578163	0.2883079
##	2021-03-24	0.0677284502	3.65058731	47.17154	174.4180	45.4625377	0.2863905
##	2021-03-31	0.0523948866	3.82966086	49.26529	176.6727	48.7877040	0.2861198
##	2021-04-07	0.0509740652	3.97833119	47.41258	178.9942	51.1303490	0.1962387
##	2021-04-14	0.0582724328	4.13753281	53.54198	180.8979	53.9400928	0.1992535
##	2021-04-21	0.0642200453	4.31161030	62.28655	183.3763	57.3205725	0.1960096
##	2021-04-28	0.0237202669	4.40738483	57.83542	185.8367	57.8056719	0.2031218
##	2021-05-05	0.0290585904	4.49969419	57.32419	186.6200	59.8690894	0.1867206
##	2021-05-12	0.0102354458	4.53728980	55.91447	188.5280	60.8166281	0.1864192
##	2021-05-19	-0.0013342184	4.53990883	50.08993	189.4400	61.5609147	0.1979861
##	2021-05-26	0.0152959179	4.53986497	54.39245	190.6712	62.7956649	0.1952400
##	2021-06-02	0.0192713782	4.56135901	53.58220	192.0983	64.0318184	0.1825789
##	2021-06-09	0.0233763559	4.58154000	59.74272	194.1792	64.7219314	0.1795292
##	2021-06-16	0.0122038207	4.58050849	52.50041	196.0784	64.8512062	0.1834912
##	2021-06-23	0.0057361305	4.53861278	47.00197	200.5100	63.8322609	0.1782630
##	2021-06-30	0.0193487116	4.49077058	53.88633	200.5100	63.8293249	0.1785742
##	2021-07-07	0.0233027425	4.46973548	52.61806	195.2300	65.0778554	0.1680206
##	2021-07-14	0.0274396907	4.46485315	59.51352	195.2300	66.5436383	0.1509119
##	2021-07-21	0.0310517451	4.45898269	52.99847	195.6372	68.0159596	0.1433922
##	2021-07-28	0.0221691511	4.46127162	54.49545	196.0281	69.6365766	0.1351358
##	2021-08-04	0.0228582817	4.49828568	65.12974	196.7164	71.1761684	0.1313872
##	2021-08-11	0.0249549597	4.57686921	64.14021	198.0711	73.1595271	0.1265923
##	2021-08-18	0.0181805649	4.60438384	61.10704	199.9680	71.4132846	0.1326434

##	2021-08-25	0.0159556219	4.58537538	62.00771	201.6752	68.4237378	0.1237426
##	2021-09-01	0.0101109854	4.51711124	56.22632	203.2117	64.6031486	0.1252469
##	2021-09-08	-0.0078108719	4.39765797	50.65625	204.5945	59.9421600	0.1269280
##	2021-09-15	-0.0154911105	4.20636725	43.53643	217.0400	53.2145054	0.1249177
##	2021-09-22	-0.0191377186	3.95321518	45.27528	217.0400	44.9390608	0.1286449
##	2021-09-29	-0.0186757880	3.67557611	49.46268	216.2908	37.0509621	0.1336332
##	2021-10-06	-0.0173421415	3.43141795	49.67719	215.5716	32.0264345	0.1161318
##	2021-10-13	-0.0203215350	3.21470863	49.78722	214.8811	28.1995483	0.1292913
##	2021-10-20	0.0191326308	3.08059850	48.70102	198.3100	28.5021342	0.1311581
##	2021-10-27	0.0456959735	3.06632720	56.88901	198.3100	31.8492852	0.1373884
##	2021-11-03	0.0536364838	3.14805645	55.08775	199.3680	37.1384585	0.1380462
##	2021-11-10	0.0811051857	3.30563586	54.04901	200.9713	42.5280418	0.1446216
##	2021-11-17	0.1056811299	3.54612324	52.35357	203.4296	48.7361049	0.1458991
##	2021-11-24	0.1077665121	3.79639026	56.30953	206.8016	53.4687266	0.1515843
##	2021-12-01	0.0829036564	3.97487457	52.28891	209.8365	54.4692251	0.1851672
##	2021-12-08	0.0931287466	4.14280596	58.84760	212.5678	57.0676601	0.1869308
##	2021-12-15	0.0845923171	4.28183731	57.44150	215.0261	59.7325453	0.1876739
##	2021-12-22	0.0701839673	4.41084329	65.25283	217.2384	63.2111556	0.1845077
##	2021-12-29	0.1113566480	4.58795688	70.14091	219.7010	66.7473884	0.1909481
##	2022-01-05	0.1013432461	4.73873226	60.59980	223.7973	68.3533541	0.1860289
##	2022-01-12	0.0541609330	4.79521146	54.17019	227.3201	66.1395891	0.1868615
##	2022-01-19	0.0100317092	4.71101572	47.64254	248.9600	59.4093301	0.1904682
##	2022-01-26	-0.0435056423	4.34070080	35.77217	248.9600	44.9586052	0.2498553
##	2022-02-02	-0.0160138698	3.87242962	35.66634	246.9000	32.9867373	0.2479854
##	2022-02-09	-0.0322699403	3.38119811	37.84904	244.9224	23.8364061	0.2231297
##	2022-02-16	-0.0414766288	2.84287559	32.81984	243.0239	14.4329446	0.2274820
##	2022-02-23	-0.0745525630	2.23705812	28.14567	241.2014	3.7685013	0.2392268
##	2022-03-02	-0.1161428707	1.68847179	33.97853	238.5067	-3.7446061	0.2449070
##	2022-03-09	-0.1000544173	1.22584192	41.46931	235.9737	-8.8855429	0.2524530
##	2022-03-16	-0.0638053164	0.85912244	43.39889	233.5927	-12.2615888	0.2724611
##	2022-03-23	-0.0295579963	0.57059914	48.36293	231.3545	-14.8442768	0.2704381
##	2022-03-30	0.0729430791	0.45806196	48.82351	229.2506	-13.1616996	0.2731701
##	2022-04-06	0.0865010939	0.53330038	51.42741	196.2900	-7.1895053	0.2218471
##	2022-04-13	0.0752778614	0.68979066	52.84807	196.2900	-1.1615722	0.2197428
##	2022-04-20	0.0906123148	0.87838858	52.18544	198.0004	4.3220190	0.2189374
##	2022-04-27	0.0907033489	1.04160967	50.87766	199.6424	8.2740918	0.2513723
##	2022-05-04	0.0507983939	1.18407221	58.00602	201.2187	11.7627650	0.2601373
##	2022-05-11	-0.0072554634	1.15781374	49.94635	202.7319	10.1292066	0.2696083
##	2022-05-18	-0.0173787494	1.02357483	42.74791	204.1847	6.9927648	0.2632270
##	2022-05-25	-0.0205005132	0.86517928	48.81256	205.5793	4.1098157	0.2425833
##	2022-06-01	-0.0261150710	0.73741171	54.78810	206.9181	2.2562332	0.2494809
##	2022-06-08	-0.0523072591	0.63873575	49.40391	208.2034	0.7388722	0.2435616
##	2022-06-15	-0.0987600336	0.46817256	42.23852	239.0500	-3.3171213	0.2635004
##	2022-06-22	-0.0975761115	0.26170848	40.75722	239.0500	-7.9676704	0.2774309
##	2022-06-29	-0.0552232764	0.07808347	41.76008	237.7740	-11.4057110	0.2900824
##	2022-07-06	-0.0207310801	-0.04427866	40.88669	236.5490	-12.4694008	0.2651223
##	2022-07-13	-0.0029563710	-0.16757261	32.11020	235.3731	-14.2531208	0.2551082
##	2022-07-20	0.0116732085	-0.24772038	41.25323	234.2442	-14.8480471	0.2424535
##	2022-07-27	0.0659559358	-0.16355326	51.61717	207.1500	-10.3547326	0.2854358
##	2022-08-03	0.1050043520	0.09236925	60.03655	207.1500	-2.9918559	0.2897611
##	2022-08-10	0.1387237829	0.49708483	67.73774	208.6868	5.6218476	0.2863077
##	2022-08-17	0.2151154543	1.02559946	75.98054	211.4656	15.0002321	0.2847957
##	2022-08-24	0.2059584131	1.56593241	77.91541	215.4715	22.5223042	0.2637063
##	2022-08-31	0.1551717945	2.00022430	68.59011	219.1570	25.9818031	0.2527636
##	2022-09-07	0.1216984273	2.32210012	60.11682	222.5477	27.3641572	0.2429298
##	2022-09-14	0.1412644202	2.50246605	56.11143	225.6670	26.3476623	0.2377298
##	2022-09-21	0.1224296090	2.55160400	56.48660	228.5369	23.4555825	0.2368624
##	2022-09-28	0.0513822022	2.52049414	48.76275	230.4200	20.5534487	0.2449987
##	2022-10-05	0.0068947678	2.48315054	49.37151	231.9500	19.4063360	0.2057967
##	2022-10-12	-0.0580849078	2.33670161	44.44786	261.5400	14.9901044	0.1956467

```
## 2022-10-19 -0.0632957312 2.18641118 49.72869 261.5400 11.4219180 0.1976342
## 2022-10-26 -0.0170720249 2.04957615 51.52422 260.0428 8.1314016 0.2269538
## 2022-11-02 0.0271127138 1.93931202 49.23300 258.6055 5.5463746 0.2606250
## 2022-11-09 0.0476500395 1.86692598 49.20839 257.2257 3.9439594 0.2653165
## 2022-11-16 0.0907484966 1.90671540 48.83463 256.7200 6.2911022 0.2641173
## 2022-11-23 0.1175852942 2.06829101 49.31528 224.1100 11.0998256 0.2624611
## 2022-11-30 0.1214466676 2.30075393 42.97382 224.1100 16.7135176 0.2759187
```

1. Backtesting Logic

First, we need to create a corresponding index for each week:

```
# count number of weeks in data from one of the dataframes
sample_xts <- sp500_stocks$Industrials$ADP
sample_xts
```

```
##           date direction_lead adp_adjclose_lead adp_adjclose_lag0
## 2018-01-03 2018-01-03           Up      0.0034056789             NA
## 2018-01-10 2018-01-10           Up      0.0367165163      0.0034056789
## 2018-01-17 2018-01-17          Down     -0.0097978034      0.0367165163
## 2018-01-24 2018-01-24           Up      0.0226601550     -0.0097978034
## 2018-01-31 2018-01-31          Down     -0.0849617732      0.0226601550
## 2018-02-07 2018-02-07          Down     -0.0075129867     -0.0849617732
## 2018-02-14 2018-02-14           Up      0.0296336494     -0.0075129867
## 2018-02-21 2018-02-21          Down     -0.0067410555      0.0296336494
## 2018-02-28 2018-02-28          Down     -0.0012145837     -0.0067410555
## 2018-03-07 2018-03-07           Up      0.0134404536     -0.0012145837
## 2018-03-14 2018-03-14           Up      0.0022366154      0.0134404536
## 2018-03-21 2018-03-21          Down     -0.0403351117      0.0022366154
## 2018-03-28 2018-03-28           Up      0.0434243990     -0.0403351117
## 2018-04-04 2018-04-04          Down     -0.0098150847      0.0434243990
## 2018-04-11 2018-04-11           Up      0.0258778891     -0.0098150847
## 2018-04-18 2018-04-18          Down     -0.0162343808      0.0258778891
## 2018-04-25 2018-04-25           Up      0.0449063696     -0.0162343808
## 2018-05-02 2018-05-02           Up      0.0399891791      0.0449063696
## 2018-05-09 2018-05-09           Up      0.0076845330      0.0399891791
## 2018-05-16 2018-05-16           Up      0.0104126065      0.0076845330
## 2018-05-23 2018-05-23           Up      0.0097698998      0.0104126065
## 2018-05-30 2018-05-30           Up      0.0410207164      0.0097698998
## 2018-06-06 2018-06-06           Up      0.0357611079      0.0410207164
## 2018-06-13 2018-06-13          Down     -0.0183374645      0.0357611079
## 2018-06-20 2018-06-20          Down     -0.0348552433     -0.0183374645
## 2018-06-27 2018-06-27           Up      0.0171362869     -0.0348552433
## 2018-07-11 2018-07-11           Up      0.0156122706      0.0171362869
## 2018-07-18 2018-07-18           Up      0.0119284342      0.0156122706
## 2018-07-25 2018-07-25          Down     -0.0481400150      0.0119284342
## 2018-08-01 2018-08-01           Up      0.0385364255     -0.0481400150
## 2018-08-08 2018-08-08           Up      0.0245114357      0.0385364255
## 2018-08-15 2018-08-15           Up      0.0144799819      0.0245114357
## 2018-08-22 2018-08-22           Up      0.0210608816      0.0144799819
## 2018-08-29 2018-08-29          Down     -0.0014360720      0.0210608816
## 2018-09-05 2018-09-05           Up      0.0067514757     -0.0014360720
## 2018-09-12 2018-09-12           Up      0.0036128152      0.0067514757
## 2018-09-19 2018-09-19           Up      0.0178701662      0.0036128152
## 2018-09-26 2018-09-26           Up      0.0130806553      0.0178701662
## 2018-10-03 2018-10-03          Down     -0.0669029377      0.0130806553
## 2018-10-10 2018-10-10           Up      0.0131732262     -0.0669029377
## 2018-10-17 2018-10-17          Down     -0.0427354438      0.0131732262
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##	2018-10-24	2018-10-24	Up	0.0456544931	-0.0427354438
##	2018-10-31	2018-10-31	Up	0.0288686983	0.0456544931
##	2018-11-07	2018-11-07	Down	-0.0383527580	0.0288686983
##	2018-11-14	2018-11-14	Down	-0.0115573787	-0.0383527580
##	2018-11-21	2018-11-21	Up	0.0519981573	-0.0115573787
##	2018-11-28	2018-11-28	Down	-0.0627589107	0.0519981573
##	2018-12-12	2018-12-12	Down	-0.0628203743	-0.0627589107
##	2018-12-19	2018-12-19	Down	-0.0203862106	-0.0628203743
##	2018-12-26	2018-12-26	Up	0.0189271017	-0.0203862106
##	2019-01-02	2019-01-02	Up	0.0097875949	0.0189271017
##	2019-01-09	2019-01-09	Up	0.0101444749	0.0097875949
##	2019-01-16	2019-01-16	Up	0.0124262279	0.0101444749
##	2019-01-23	2019-01-23	Up	0.0364502868	0.0124262279
##	2019-01-30	2019-01-30	Up	0.0430315425	0.0364502868
##	2019-02-06	2019-02-06	Up	0.0332465881	0.0430315425
##	2019-02-13	2019-02-13	Up	0.0006640841	0.0332465881
##	2019-02-20	2019-02-20	Up	0.0159457191	0.0006640841
##	2019-02-27	2019-02-27	Down	-0.0029461148	0.0159457191
##	2019-03-06	2019-03-06	Up	0.0072232111	-0.0029461148
##	2019-03-13	2019-03-13	Up	0.0076907571	0.0072232111
##	2019-03-20	2019-03-20	Up	0.0178249980	0.0076907571
##	2019-03-27	2019-03-27	Up	0.0271182831	0.0178249980
##	2019-04-03	2019-04-03	Down	-0.0042301509	0.0271182831
##	2019-04-10	2019-04-10	Up	0.0150342133	-0.0042301509
##	2019-04-17	2019-04-17	Up	0.0039831735	0.0150342133
##	2019-04-24	2019-04-24	Down	-0.0375143517	0.0039831735
##	2019-05-01	2019-05-01	Up	0.0107999086	-0.0375143517
##	2019-05-08	2019-05-08	Up	0.0011301212	0.0107999086
##	2019-05-15	2019-05-15	Up	0.0247888734	0.0011301212
##	2019-05-22	2019-05-22	Down	-0.0216563327	0.0247888734
##	2019-05-29	2019-05-29	Up	0.0172396903	-0.0216563327
##	2019-06-05	2019-06-05	Up	0.0156771465	0.0172396903
##	2019-06-12	2019-06-12	Up	0.0229660748	0.0156771465
##	2019-06-19	2019-06-19	Down	-0.0328057523	0.0229660748
##	2019-06-26	2019-06-26	Up	0.0077697752	-0.0328057523
##	2019-07-03	2019-07-03	Up	0.0027386216	0.0077697752
##	2019-07-10	2019-07-10	Up	0.0051524992	0.0027386216
##	2019-07-17	2019-07-17	Up	0.0109444288	0.0051524992
##	2019-07-24	2019-07-24	Down	-0.0041351243	0.0109444288
##	2019-07-31	2019-07-31	Down	-0.0123873283	-0.0041351243
##	2019-08-07	2019-08-07	Down	-0.0038380945	-0.0123873283
##	2019-08-14	2019-08-14	Up	0.0350832183	-0.0038380945
##	2019-08-21	2019-08-21	Down	-0.0146628530	0.0350832183
##	2019-08-28	2019-08-28	Up	0.0147806394	-0.0146628530
##	2019-09-04	2019-09-04	Down	-0.0518175584	0.0147806394
##	2019-09-11	2019-09-11	Down	-0.0162204826	-0.0518175584
##	2019-09-18	2019-09-18	Up	0.0244806282	-0.0162204826
##	2019-09-25	2019-09-25	Down	-0.0317963577	0.0244806282
##	2019-10-02	2019-10-02	Up	0.0116795938	-0.0317963577
##	2019-10-09	2019-10-09	Up	0.0353392988	0.0116795938
##	2019-10-16	2019-10-16	Down	-0.0254179322	0.0353392988
##	2019-10-23	2019-10-23	Up	0.0253569944	-0.0254179322
##	2019-10-30	2019-10-30	Down	-0.0277342686	0.0253569944
##	2019-11-06	2019-11-06	Up	0.0567339269	-0.0277342686
##	2019-11-13	2019-11-13	Up	0.0094241532	0.0567339269
##	2019-11-20	2019-11-20	Up	0.0052620127	0.0094241532
##	2019-11-27	2019-11-27	Down	-0.0171152412	0.0052620127
##	2019-12-04	2019-12-04	Down	-0.0079210855	-0.0171152412
##	2019-12-11	2019-12-11	Up	0.0073676665	-0.0079210855
##	2019-12-18	2019-12-18	Up	0.0127493023	0.0073676665

##	2020-01-08	2020-01-08	Up	0.0181017432	0.0127493023
##	2020-01-15	2020-01-15	Up	0.0314431678	0.0181017432
##	2020-01-22	2020-01-22	Down	-0.0417387195	0.0314431678
##	2020-01-29	2020-01-29	Up	0.0433637841	-0.0417387195
##	2020-02-05	2020-02-05	Down	-0.0033088409	0.0433637841
##	2020-02-12	2020-02-12	Up	0.0179253053	-0.0033088409
##	2020-02-19	2020-02-19	Down	-0.0859035078	0.0179253053
##	2020-02-26	2020-02-26	Down	-0.0117323219	-0.0859035078
##	2020-03-04	2020-03-04	Down	-0.1049619265	-0.0117323219
##	2020-03-11	2020-03-11	Down	-0.2238234644	-0.1049619265
##	2020-03-18	2020-03-18	Up	0.0415563264	-0.2238234644
##	2020-03-25	2020-03-25	Up	0.0565328911	0.0415563264
##	2020-04-01	2020-04-01	Up	0.0657085479	0.0565328911
##	2020-04-08	2020-04-08	Down	-0.0064452289	0.0657085479
##	2020-04-15	2020-04-15	Up	0.0076717085	-0.0064452289
##	2020-04-22	2020-04-22	Up	0.0501966493	0.0076717085
##	2020-04-29	2020-04-29	Down	-0.0088152514	0.0501966493
##	2020-05-06	2020-05-06	Down	-0.0715358409	-0.0088152514
##	2020-05-13	2020-05-13	Up	0.0014850575	-0.0715358409
##	2020-05-20	2020-05-20	Up	0.0708113814	0.0014850575
##	2020-05-27	2020-05-27	Up	0.0473177188	0.0708113814
##	2020-06-03	2020-06-03	Up	0.0283395041	0.0473177188
##	2020-06-10	2020-06-10	Down	-0.0291051830	0.0283395041
##	2020-06-17	2020-06-17	Down	-0.0395286035	-0.0291051830
##	2020-06-24	2020-06-24	Up	0.0290545567	-0.0395286035
##	2020-07-01	2020-07-01	Down	-0.0067965250	0.0290545567
##	2020-07-08	2020-07-08	Up	0.0033704682	-0.0067965250
##	2020-07-15	2020-07-15	Down	-0.0062104141	0.0033704682
##	2020-07-22	2020-07-22	Down	-0.0741913594	-0.0062104141
##	2020-07-29	2020-07-29	Down	-0.0172867793	-0.0741913594
##	2020-08-05	2020-08-05	Up	0.0350682767	-0.0172867793
##	2020-08-12	2020-08-12	Down	-0.0048837564	0.0350682767
##	2020-08-19	2020-08-19	Up	0.0050987469	-0.0048837564
##	2020-08-26	2020-08-26	Up	0.0203486690	0.0050987469
##	2020-09-02	2020-09-02	Down	-0.0373247945	0.0203486690
##	2020-09-09	2020-09-09	Up	0.0099251275	-0.0373247945
##	2020-09-16	2020-09-16	Down	-0.0675106165	0.0099251275
##	2020-09-23	2020-09-23	Up	0.0803534818	-0.0675106165
##	2020-09-30	2020-09-30	Up	0.0299435110	0.0803534818
##	2020-10-07	2020-10-07	Up	0.0327158375	0.0299435110
##	2020-10-14	2020-10-14	Down	-0.0112405372	0.0327158375
##	2020-10-21	2020-10-21	Up	0.0545293533	-0.0112405372
##	2020-10-28	2020-10-28	Up	0.0594558168	0.0545293533
##	2020-11-04	2020-11-04	Up	0.0433413415	0.0594558168
##	2020-11-11	2020-11-11	Up	0.0074777824	0.0433413415
##	2020-11-18	2020-11-18	Up	0.0052988320	0.0074777824
##	2020-11-25	2020-11-25	Down	-0.0144653441	0.0052988320
##	2020-12-02	2020-12-02	Up	0.0130858622	-0.0144653441
##	2020-12-09	2020-12-09	Up	0.0153802782	0.0130858622
##	2020-12-16	2020-12-16	Down	-0.0022804677	0.0153802782
##	2020-12-23	2020-12-23	Down	-0.0079084799	-0.0022804677
##	2020-12-30	2020-12-30	Down	-0.0345940570	-0.0079084799
##	2021-01-06	2021-01-06	Down	-0.0194859426	-0.0345940570
##	2021-01-13	2021-01-13	Down	-0.0141282264	-0.0194859426
##	2021-01-20	2021-01-20	Up	0.0202434073	-0.0141282264
##	2021-01-27	2021-01-27	Up	0.0069774707	0.0202434073
##	2021-02-03	2021-02-03	Up	0.0006590117	0.0069774707
##	2021-02-10	2021-02-10	Up	0.0011376740	0.0006590117
##	2021-02-17	2021-02-17	Up	0.0552284993	0.0011376740
##	2021-02-24	2021-02-24	Down	-0.0121331016	0.0552284993

##	2021-03-03	2021-03-03	Up	0.0425238439	-0.0121331016
##	2021-03-10	2021-03-10	Up	0.0365333438	0.0425238439
##	2021-03-17	2021-03-17	Down	-0.0139892849	0.0365333438
##	2021-03-24	2021-03-24	Up	0.0171245036	-0.0139892849
##	2021-03-31	2021-03-31	Down	-0.0142141430	0.0171245036
##	2021-04-07	2021-04-07	Up	0.0283337024	-0.0142141430
##	2021-04-14	2021-04-14	Up	0.0163964250	0.0283337024
##	2021-04-21	2021-04-21	Down	-0.0403804497	0.0163964250
##	2021-04-28	2021-04-28	Up	0.0370298464	-0.0403804497
##	2021-05-05	2021-05-05	Down	-0.0220317155	0.0370298464
##	2021-05-12	2021-05-12	Up	0.0073630665	-0.0220317155
##	2021-05-19	2021-05-19	Up	0.0183795002	0.0073630665
##	2021-05-26	2021-05-26	Up	0.0206717669	0.0183795002
##	2021-06-02	2021-06-02	Down	-0.0012606362	0.0206717669
##	2021-06-09	2021-06-09	Down	-0.0001521013	-0.0012606362
##	2021-06-16	2021-06-16	Down	-0.0101921362	-0.0001521013
##	2021-06-23	2021-06-23	Up	0.0172149908	-0.0101921362
##	2021-06-30	2021-06-30	Up	0.0234860856	0.0172149908
##	2021-07-07	2021-07-07	Up	0.0056884391	0.0234860856
##	2021-07-14	2021-07-14	Down	-0.0001465600	0.0056884391
##	2021-07-21	2021-07-21	Up	0.0117176595	-0.0001465600
##	2021-07-28	2021-07-28	Up	0.0244474362	0.0117176595
##	2021-08-04	2021-08-04	Up	0.0198486340	0.0244474362
##	2021-08-11	2021-08-11	Down	-0.0366399125	0.0198486340
##	2021-08-18	2021-08-18	Down	-0.0013439997	-0.0366399125
##	2021-08-25	2021-08-25	Down	-0.0064088410	-0.0013439997
##	2021-09-01	2021-09-01	Down	-0.0083983425	-0.0064088410
##	2021-09-08	2021-09-08	Down	-0.0181859571	-0.0083983425
##	2021-09-15	2021-09-15	Down	-0.0110824952	-0.0181859571
##	2021-09-22	2021-09-22	Up	0.0063836628	-0.0110824952
##	2021-09-29	2021-09-29	Up	0.0267461144	0.0063836628
##	2021-10-06	2021-10-06	Up	0.0009751352	0.0267461144
##	2021-10-13	2021-10-13	Up	0.0375904718	0.0009751352
##	2021-10-20	2021-10-20	Up	0.0409251302	0.0375904718
##	2021-10-27	2021-10-27	Up	0.0169761758	0.0409251302
##	2021-11-03	2021-11-03	Up	0.0170846823	0.0169761758
##	2021-11-10	2021-11-10	Up	0.0310409582	0.0170846823
##	2021-11-17	2021-11-17	Down	-0.0106527324	0.0310409582
##	2021-11-24	2021-11-24	Down	-0.0325238613	-0.0106527324
##	2021-12-01	2021-12-01	Up	0.0322250630	-0.0325238613
##	2021-12-08	2021-12-08	Up	0.0028255252	0.0322250630
##	2021-12-15	2021-12-15	Up	0.0156935089	0.0028255252
##	2021-12-22	2021-12-22	Up	0.0427963113	0.0156935089
##	2021-12-29	2021-12-29	Down	-0.0201606863	0.0427963113
##	2022-01-05	2022-01-05	Down	-0.0352984585	-0.0201606863
##	2022-01-12	2022-01-12	Down	-0.0426652871	-0.0352984585
##	2022-01-19	2022-01-19	Down	-0.1298084847	-0.0426652871
##	2022-01-26	2022-01-26	Up	0.0515210689	-0.1298084847
##	2022-02-02	2022-02-02	Up	0.0155589437	0.0515210689
##	2022-02-09	2022-02-09	Down	-0.0333204010	0.0155589437
##	2022-02-16	2022-02-16	Down	-0.0397026743	-0.0333204010
##	2022-02-23	2022-02-23	Up	0.0496898622	-0.0397026743
##	2022-03-02	2022-03-02	Up	0.0163950987	0.0496898622
##	2022-03-09	2022-03-09	Up	0.0180476240	0.0163950987
##	2022-03-16	2022-03-16	Up	0.0005175584	0.0180476240
##	2022-03-23	2022-03-23	Up	0.0690210965	0.0005175584
##	2022-03-30	2022-03-30	Up	0.0430955088	0.0690210965
##	2022-04-06	2022-04-06	Down	-0.0171785119	0.0430955088
##	2022-04-13	2022-04-13	Down	-0.0048032581	-0.0171785119
##	2022-04-20	2022-04-20	Down	-0.0200605522	-0.0048032581

##	2022-04-27	2022-04-27	Up	0.0038522448	-0.0200605522
##	2022-05-04	2022-05-04	Down	-0.0931149812	0.0038522448
##	2022-05-11	2022-05-11	Down	-0.0001439218	-0.0931149812
##	2022-05-18	2022-05-18	Up	0.0255696273	-0.0001439218
##	2022-05-25	2022-05-25	Up	0.0250232426	0.0255696273
##	2022-06-01	2022-06-01	Up	0.0030502390	0.0250232426
##	2022-06-08	2022-06-08	Down	-0.0554002012	0.0030502390
##	2022-06-15	2022-06-15	Up	0.0012060305	-0.0554002012
##	2022-06-22	2022-06-22	Up	0.0228329086	0.0012060305
##	2022-06-29	2022-06-29	Up	0.0236125975	0.0228329086
##	2022-07-06	2022-07-06	Down	-0.0289048751	0.0236125975
##	2022-07-13	2022-07-13	Up	0.0233200286	-0.0289048751
##	2022-07-20	2022-07-20	Up	0.0799820102	0.0233200286
##	2022-07-27	2022-07-27	Up	0.0429869351	0.0799820102
##	2022-08-03	2022-08-03	Up	0.0328136387	0.0429869351
##	2022-08-10	2022-08-10	Up	0.0320395386	0.0328136387
##	2022-08-17	2022-08-17	Down	-0.0176077831	0.0320395386
##	2022-08-24	2022-08-24	Down	-0.0468771121	-0.0176077831
##	2022-08-31	2022-08-31	Down	-0.0110670319	-0.0468771121
##	2022-09-07	2022-09-07	Down	-0.0260980579	-0.0110670319
##	2022-09-14	2022-09-14	Down	-0.0174664933	-0.0260980579
##	2022-09-21	2022-09-21	Up	0.0066180695	-0.0174664933
##	2022-09-28	2022-09-28	Up	0.0301509783	0.0066180695
##	2022-10-05	2022-10-05	Down	-0.0645357957	0.0301509783
##	2022-10-12	2022-10-12	Up	0.0399309699	-0.0645357957
##	2022-10-19	2022-10-19	Up	0.0081130745	0.0399309699
##	2022-10-26	2022-10-26	Up	0.0097339132	0.0081130745
##	2022-11-02	2022-11-02	Up	0.0123060405	0.0097339132
##	2022-11-09	2022-11-09	Up	0.0536160887	0.0123060405
##	2022-11-16	2022-11-16	Up	0.0347185836	0.0536160887
##	2022-11-23	2022-11-23	Up	0.0059237535	0.0347185836
##	2022-11-30	2022-11-30	<NA>	NA	0.0059237535
##	adp_adjclose_lag1 adp_adjclose_lag2 adp_adjclose_lag3 atr				
##	2018-01-03	NA	NA	NA	NA
##	2018-01-10	NA	NA	NA	NA
##	2018-01-17	0.0034056789	NA	NA	NA
##	2018-01-24	0.0367165163	0.0034056789	NA	NA
##	2018-01-31	-0.0097978034	0.0367165163	0.0034056789	NA
##	2018-02-07	0.0226601550	-0.0097978034	0.0367165163	NA
##	2018-02-14	-0.0849617732	0.0226601550	-0.0097978034	NA
##	2018-02-21	-0.0075129867	-0.0849617732	0.0226601550	NA
##	2018-02-28	0.0296336494	-0.0075129867	-0.0849617732	NA
##	2018-03-07	-0.0067410555	0.0296336494	-0.0075129867	NA
##	2018-03-14	-0.0012145837	-0.0067410555	0.0296336494	NA
##	2018-03-21	0.0134404536	-0.0012145837	-0.0067410555	NA
##	2018-03-28	0.0022366154	0.0134404536	-0.0012145837	NA
##	2018-04-04	-0.0403351117	0.0022366154	0.0134404536	NA
##	2018-04-11	0.0434243990	-0.0403351117	0.0022366154	3.947142
##	2018-04-18	-0.0098150847	0.0434243990	-0.0403351117	3.951632
##	2018-04-25	0.0258778891	-0.0098150847	0.0434243990	3.905801
##	2018-05-02	-0.0162343808	0.0258778891	-0.0098150847	4.147529
##	2018-05-09	0.0449063696	-0.0162343808	0.0258778891	4.269849
##	2018-05-16	0.0399891791	0.0449063696	-0.0162343808	4.080575
##	2018-05-23	0.0076845330	0.0399891791	0.0449063696	3.951248
##	2018-05-30	0.0104126065	0.0076845330	0.0399891791	3.861159
##	2018-06-06	0.0097698998	0.0104126065	0.0076845330	3.991791
##	2018-06-13	0.0410207164	0.0097698998	0.0104126065	4.050234
##	2018-06-20	0.0357611079	0.0410207164	0.0097698998	3.949503
##	2018-06-27	-0.0183374645	0.0357611079	0.0410207164	4.014539
##	2018-07-11	-0.0348552433	-0.0183374645	0.0357611079	3.937071

## 2018-07-18	0.0171362869	-0.0348552433	-0.0183374645	3.834423
## 2018-07-25	0.0156122706	0.0171362869	-0.0348552433	3.718393
## 2018-08-01	0.0119284342	0.0156122706	0.0171362869	4.162793
## 2018-08-08	-0.0481400150	0.0119284342	0.0156122706	4.281164
## 2018-08-15	0.0385364255	-0.0481400150	0.0119284342	4.253938
## 2018-08-22	0.0245114357	0.0385364255	-0.0481400150	4.120084
## 2018-08-29	0.0144799819	0.0245114357	0.0385364255	4.067221
## 2018-09-05	0.0210608816	0.0144799819	0.0245114357	3.913134
## 2018-09-12	-0.0014360720	0.0210608816	0.0144799819	3.725766
## 2018-09-19	0.0067514757	-0.0014360720	0.0210608816	3.559641
## 2018-09-26	0.0036128152	0.0067514757	-0.0014360720	3.591809
## 2018-10-03	0.0178701662	0.0036128152	0.0067514757	3.613108
## 2018-10-10	0.0130806553	0.0178701662	0.0036128152	4.070743
## 2018-10-17	-0.0669029377	0.0130806553	0.0178701662	3.947833
## 2018-10-24	0.0131732262	-0.0669029377	0.0130806553	4.122273
## 2018-10-31	-0.0427354438	0.0131732262	-0.0669029377	4.397111
## 2018-11-07	0.0456544931	-0.0427354438	0.0131732262	4.395174
## 2018-11-14	0.0288686983	0.0456544931	-0.0427354438	4.495519
## 2018-11-21	-0.0383527580	0.0288686983	0.0456544931	4.407982
## 2018-11-28	-0.0115573787	-0.0383527580	0.0288686983	4.634555
## 2018-12-12	0.0519981573	-0.0115573787	-0.0383527580	4.957802
## 2018-12-19	-0.0627589107	0.0519981573	-0.0115573787	5.369387
## 2018-12-26	-0.0628203743	-0.0627589107	0.0519981573	5.623717
## 2019-01-02	-0.0203862106	-0.0628203743	-0.0627589107	5.442023
## 2019-01-09	0.0189271017	-0.0203862106	-0.0628203743	5.224021
## 2019-01-16	0.0097875949	0.0189271017	-0.0203862106	5.003020
## 2019-01-23	0.0101444749	0.0097875949	0.0189271017	4.787091
## 2019-01-30	0.0124262279	0.0101444749	0.0097875949	4.900155
## 2019-02-06	0.0364502868	0.0124262279	0.0101444749	5.027287
## 2019-02-13	0.0430315425	0.0364502868	0.0124262279	5.083196
## 2019-02-20	0.0332465881	0.0430315425	0.0364502868	4.808682
## 2019-02-27	0.0006640841	0.0332465881	0.0430315425	4.668062
## 2019-03-06	0.0159457191	0.0006640841	0.0332465881	4.416772
## 2019-03-13	-0.0029461148	0.0159457191	0.0006640841	4.227716
## 2019-03-20	0.0072232111	-0.0029461148	0.0159457191	4.079309
## 2019-03-27	0.0076907571	0.0072232111	-0.0029461148	4.019357
## 2019-04-03	0.0178249980	0.0076907571	0.0072232111	4.136546
## 2019-04-10	0.0271182831	0.0178249980	0.0076907571	3.943222
## 2019-04-17	-0.0042301509	0.0271182831	0.0178249980	3.843706
## 2019-04-24	0.0150342133	-0.0042301509	0.0271182831	3.758441
## 2019-05-01	0.0039831735	0.0150342133	-0.0042301509	4.117838
## 2019-05-08	-0.0375143517	0.0039831735	0.0150342133	4.002278
## 2019-05-15	0.0107999086	-0.0375143517	0.0039831735	3.907115
## 2019-05-22	0.0011301212	0.0107999086	-0.0375143517	3.960893
## 2019-05-29	0.0247888734	0.0011301212	0.0107999086	3.994400
## 2019-06-05	-0.0216563327	0.0247888734	0.0011301212	3.916943
## 2019-06-12	0.0172396903	-0.0216563327	0.0247888734	3.888590
## 2019-06-19	0.0156771465	0.0172396903	-0.0216563327	3.871548
## 2019-06-26	0.0229660748	0.0156771465	0.0172396903	3.990722
## 2019-07-03	-0.0328057523	0.0229660748	0.0156771465	3.894956
## 2019-07-10	0.0077697752	-0.0328057523	0.0229660748	3.762459
## 2019-07-17	0.0027386216	0.0077697752	-0.0328057523	3.622997
## 2019-07-24	0.0051524992	0.0027386216	0.0077697752	3.512783
## 2019-07-31	0.0109444288	0.0051524992	0.0027386216	3.765442
## 2019-08-07	-0.0041351243	0.0109444288	0.0051524992	3.925053
## 2019-08-14	-0.0123873283	-0.0041351243	0.0109444288	3.921120
## 2019-08-21	-0.0038380945	-0.0123873283	-0.0041351243	4.058898
## 2019-08-28	0.0350832183	-0.0038380945	-0.0123873283	4.123977
## 2019-09-04	-0.0146628530	0.0350832183	-0.0038380945	4.034407
## 2019-09-11	0.0147806394	-0.0146628530	0.0350832183	4.411236

## 2019-09-18	-0.0518175584	0.0147806394	-0.0146628530	4.460434
## 2019-09-25	-0.0162204826	-0.0518175584	0.0147806394	4.440402
## 2019-10-02	0.0244806282	-0.0162204826	-0.0518175584	4.566087
## 2019-10-09	-0.0317963577	0.0244806282	-0.0162204826	4.407081
## 2019-10-16	0.0116795938	-0.0317963577	0.0244806282	4.520146
## 2019-10-23	0.0353392988	0.0116795938	-0.0317963577	4.559422
## 2019-10-30	-0.0254179322	0.0353392988	0.0116795938	4.667321
## 2019-11-06	0.0253569944	-0.0254179322	0.0353392988	4.819654
## 2019-11-13	-0.0277342686	0.0253569944	-0.0254179322	5.179679
## 2019-11-20	0.0567339269	-0.0277342686	0.0253569944	4.995416
## 2019-11-27	0.0094241532	0.0567339269	-0.0277342686	4.732886
## 2019-12-04	0.0052620127	0.0094241532	0.0567339269	4.726251
## 2019-12-11	-0.0171152412	0.0052620127	0.0094241532	4.535806
## 2019-12-18	-0.0079210855	-0.0171152412	0.0052620127	4.390391
## 2020-01-08	0.0073676665	-0.0079210855	-0.0171152412	4.287506
## 2020-01-15	0.0127493023	0.0073676665	-0.0079210855	4.322684
## 2020-01-22	0.0181017432	0.0127493023	0.0073676665	4.519635
## 2020-01-29	0.0314431678	0.0181017432	0.0127493023	4.724661
## 2020-02-05	-0.0417387195	0.0314431678	0.0181017432	4.956471
## 2020-02-12	0.0433637841	-0.0417387195	0.0314431678	4.884581
## 2020-02-19	-0.0033088409	0.0433637841	-0.0417387195	4.800683
## 2020-02-26	0.0179253053	-0.0033088409	0.0433637841	5.530635
## 2020-03-04	-0.0859035078	0.0179253053	-0.0033088409	5.815590
## 2020-03-11	-0.0117323219	-0.0859035078	0.0179253053	6.735904
## 2020-03-18	-0.1049619265	-0.0117323219	-0.0859035078	9.461911
## 2020-03-25	-0.2238234644	-0.1049619265	-0.0117323219	9.751060
## 2020-04-01	0.0415563264	-0.2238234644	-0.1049619265	9.827414
## 2020-04-08	0.0565328911	0.0415563264	-0.2238234644	9.831170
## 2020-04-15	0.0657085479	0.0565328911	0.0415563264	9.377516
## 2020-04-22	-0.0064452289	0.0657085479	0.0565328911	9.044122
## 2020-04-29	0.0076717085	-0.0064452289	0.0657085479	8.973828
## 2020-05-06	0.0501966493	0.0076717085	-0.0064452289	8.654269
## 2020-05-13	-0.0088152514	0.0501966493	0.0076717085	8.876106
## 2020-05-20	-0.0715358409	-0.0088152514	0.0501966493	8.392098
## 2020-05-27	0.0014850575	-0.0715358409	-0.0088152514	8.531948
## 2020-06-03	0.0708113814	0.0014850575	-0.0715358409	8.463952
## 2020-06-10	0.0473177188	0.0708113814	0.0014850575	8.325814
## 2020-06-17	0.0283395041	0.0473177188	0.0708113814	8.156113
## 2020-06-24	-0.0291051830	0.0283395041	0.0473177188	8.030676
## 2020-07-01	-0.0395286035	-0.0291051830	0.0283395041	7.857770
## 2020-07-08	0.0290545567	-0.0395286035	-0.0291051830	7.499358
## 2020-07-15	-0.0067965250	0.0290545567	-0.0395286035	7.216547
## 2020-07-22	0.0033704682	-0.0067965250	0.0290545567	6.833937
## 2020-07-29	-0.0062104141	0.0033704682	-0.0067965250	7.226512
## 2020-08-05	-0.0741913594	-0.0062104141	0.0033704682	6.976762
## 2020-08-12	-0.0172867793	-0.0741913594	-0.0062104141	6.871993
## 2020-08-19	0.0350682767	-0.0172867793	-0.0741913594	6.544707
## 2020-08-26	-0.0048837564	0.0350682767	-0.0172867793	6.289371
## 2020-09-02	0.0050987469	-0.0048837564	0.0350682767	6.236559
## 2020-09-09	0.0203486690	0.0050987469	-0.0048837564	6.316805
## 2020-09-16	-0.0373247945	0.0203486690	0.0050987469	6.078461
## 2020-09-23	0.0099251275	-0.0373247945	0.0203486690	6.311429
## 2020-09-30	-0.0675106165	0.0099251275	-0.0373247945	6.735613
## 2020-10-07	0.0803534818	-0.0675106165	0.0099251275	6.606640
## 2020-10-14	0.0299435110	0.0803534818	-0.0675106165	6.650451
## 2020-10-21	0.0327158375	0.0299435110	0.0803534818	6.365418
## 2020-10-28	-0.0112405372	0.0327158375	0.0299435110	6.803603
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## 2020-11-11	0.0594558168	0.0545293533	-0.0112405372	7.392749
## 2020-11-18	0.0433413415	0.0594558168	0.0545293533	7.172552

## 2020-11-25	0.0074777824	0.0433413415	0.0594558168	6.913084
## 2020-12-02	0.0052988320	0.0074777824	0.0433413415	6.708578
## 2020-12-09	-0.0144653441	0.0052988320	0.0074777824	6.485822
## 2020-12-16	0.0130858622	-0.0144653441	0.0052988320	6.216121
## 2020-12-23	0.0153802782	0.0130858622	-0.0144653441	6.005683
## 2020-12-30	-0.0022804677	0.0153802782	0.0130858622	5.785991
## 2021-01-06	-0.0079084799	-0.0022804677	0.0153802782	5.928420
## 2021-01-13	-0.0345940570	-0.0079084799	-0.0022804677	5.997818
## 2021-01-20	-0.0194859426	-0.0345940570	-0.0079084799	5.857975
## 2021-01-27	-0.0141282264	-0.0194859426	-0.0345940570	6.190976
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## 2021-02-10	0.0069774707	0.0202434073	-0.0141282264	5.655587
## 2021-02-17	0.0006590117	0.0069774707	0.0202434073	5.459472
## 2021-02-24	0.0011376740	0.0006590117	0.0069774707	5.763796
## 2021-03-03	0.0552284993	0.0011376740	0.0006590117	5.659238
## 2021-03-10	-0.0121331016	0.0552284993	0.0011376740	5.976435
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## 2021-03-31	-0.0139892849	0.0365333438	0.0425238439	5.795935
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## 2021-04-28	0.0163964250	0.0283337024	-0.0142141430	5.796112
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## 2021-05-19	-0.0220317155	0.0370298464	-0.0403804497	5.777774
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## 2021-06-09	0.0206717669	0.0183795002	0.0073630665	5.468101
## 2021-06-16	-0.0012606362	0.0206717669	0.0183795002	5.330380
## 2021-06-23	-0.0001521013	-0.0012606362	0.0206717669	5.126067
## 2021-06-30	-0.0101921362	-0.0001521013	-0.0012606362	5.042062
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## 2022-01-05	0.0427963113	0.0156935089	0.0028255252	6.217626
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##	2022-01-26	-0.0426652871	-0.0352984585	-0.0201606863	8.262178
##	2022-02-02	-0.1298084847	-0.0426652871	-0.0352984585	8.447736
##	2022-02-09	0.0515210689	-0.1298084847	-0.0426652871	8.093613
##	2022-02-16	0.0155589437	0.0515210689	-0.1298084847	8.216927
##	2022-02-23	-0.0333204010	0.0155589437	0.0515210689	8.227146
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##	2022-04-13	0.0430955088	0.0690210965	0.0005175584	8.359518
##	2022-04-20	-0.0171785119	0.0430955088	0.0690210965	7.951696
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##	2022-05-25	-0.0001439218	-0.0931149812	0.0038522448	8.630784
##	2022-06-01	0.0255696273	-0.0001439218	-0.0931149812	8.785728
##	2022-06-08	0.0250232426	0.0255696273	-0.0001439218	8.388890
##	2022-06-15	0.0030502390	0.0250232426	0.0255696273	8.956112
##	2022-06-22	-0.0554002012	0.0030502390	0.0250232426	8.730676
##	2022-06-29	0.0012060305	-0.0554002012	0.0030502390	8.702056
##	2022-07-06	0.0228329086	0.0012060305	-0.0554002012	8.556195
##	2022-07-13	0.0236125975	0.0228329086	0.0012060305	8.599324
##	2022-07-20	-0.0289048751	0.0236125975	0.0228329086	8.555800
##	2022-07-27	0.0233200286	-0.0289048751	0.0236125975	9.276100
##	2022-08-03	0.0799820102	0.0233200286	-0.0289048751	9.437094
##	2022-08-10	0.0429869351	0.0799820102	0.0233200286	9.525872
##	2022-08-17	0.0328136387	0.0429869351	0.0799820102	9.493310
##	2022-08-24	0.0320395386	0.0328136387	0.0429869351	9.203788
##	2022-08-31	-0.0176077831	0.0320395386	0.0328136387	9.444948
##	2022-09-07	-0.0468771121	-0.0176077831	0.0320395386	9.316738
##	2022-09-14	-0.0110670319	-0.0468771121	-0.0176077831	9.299828
##	2022-09-21	-0.0260980579	-0.0110670319	-0.0468771121	9.117697
##	2022-09-28	-0.0174664933	-0.0260980579	-0.0110670319	8.910004
##	2022-10-05	0.0066180695	-0.0174664933	-0.0260980579	8.929290
##	2022-10-12	0.0301509783	0.0066180695	-0.0174664933	9.365055
##	2022-10-19	-0.0645357957	0.0301509783	0.0066180695	9.416123
##	2022-10-26	0.0399309699	-0.0645357957	0.0301509783	9.676399
##	2022-11-02	0.0081130745	0.0399309699	-0.0645357957	9.885942
##	2022-11-09	0.0097339132	0.0081130745	0.0399309699	9.762661
##	2022-11-16	0.0123060405	0.0097339132	0.0081130745	10.232471
##	2022-11-23	0.0536160887	0.0123060405	0.0097339132	10.243009
##	2022-11-30	0.0347185836	0.0536160887	0.0123060405	10.247795
##		adx aaron	bb chaikin_vol		clv
##	2018-01-03	NA NA	NA NA		NA
##	2018-01-10	NA 50	NA NA		NA
##	2018-01-17	NA 100	NA NA		NA
##	2018-01-24	NA 100	NA NA		NA
##	2018-01-31	NA 100	NA NA		NA
##	2018-02-07	NA -50	NA NA		NA
##	2018-02-14	NA -100	NA NA		NA
##	2018-02-21	NA 50	NA NA		NA
##	2018-02-28	NA 50	NA NA		NA
##	2018-03-07	NA -100	NA NA	0.0961180716	
##	2018-03-14	NA 50	NA NA	-0.0126327645	
##	2018-03-21	NA 50	NA NA	0.0166670196	
##	2018-03-28	NA -100	NA NA	-0.0786999117	

##	2018-04-04	NA	-50	NA	NA	0.0913368631
##	2018-04-11	NA	50	NA	NA	0.1736944431
##	2018-04-18	NA	100	NA	NA	0.1448552013
##	2018-04-25	NA	50	NA	NA	0.2716272194
##	2018-05-02	NA	50	NA	NA	0.2148892362
##	2018-05-09	NA	100	NA	NA	0.2015392254
##	2018-05-16	NA	100	1.067761187	NA	0.2232572273
##	2018-05-23	NA	100	1.012325537	-5.716811e-02	0.3564731007
##	2018-05-30	NA	100	1.024715550	-1.257365e-02	0.1850084353
##	2018-06-06	NA	100	1.087730138	-3.411396e-01	0.2973142580
##	2018-06-13	NA	100	1.101707575	1.427996e+00	0.3361159768
##	2018-06-20	NA	50	0.972925843	-9.776945e-02	0.1144362923
##	2018-06-27	NA	-100	0.819205577	-7.642129e-01	-0.0735157504
##	2018-07-11	NA	-50	0.815717184	-5.007978e-01	-0.0115243953
##	2018-07-18	32.94000	100	0.836707986	8.998326e+00	0.0378454521
##	2018-07-25	33.32973	100	0.828910586	-2.085245e-01	0.1831639857
##	2018-08-01	31.75866	-50	0.629009792	-1.197053e+00	0.2883440956
##	2018-08-08	31.09066	-50	0.767416798	-2.244011e+00	0.2615296408
##	2018-08-15	30.89298	100	0.817133178	-1.144194e+00	0.3192425953
##	2018-08-22	30.94123	100	0.852756035	-1.327488e+01	0.3535075584
##	2018-08-29	31.34191	100	0.889773697	-7.348877e-01	0.4283487129
##	2018-09-05	31.71398	50	0.864914191	-1.585367e+00	0.5010040574
##	2018-09-12	32.19651	100	0.877456971	-1.774867e+01	0.4769023602
##	2018-09-19	32.71070	100	0.875086106	-3.479801e-04	0.3148684197
##	2018-09-26	33.55403	100	0.939304876	-6.231020e-01	0.2039388300
##	2018-10-03	34.61789	100	0.968273894	-1.455746e-01	0.0269344866
##	2018-10-10	33.19262	-50	0.672831245	-6.699586e+00	-0.1511913882
##	2018-10-17	31.86915	-50	0.600871826	4.437504e-02	-0.0236583064
##	2018-10-24	29.70527	-100	0.405711106	6.090347e-01	-0.1771440136
##	2018-10-31	28.13745	50	0.571700778	5.537999e-01	-0.0624081873
##	2018-11-07	27.13340	100	0.740996120	-1.711147e-01	0.1150835750
##	2018-11-14	25.70771	50	0.571136119	7.753304e-02	-0.0671984408
##	2018-11-21	23.92946	-100	0.415598563	1.751296e-01	-0.0504064069
##	2018-11-28	23.14819	50	0.724350751	4.865623e-02	0.1348406335
##	2018-12-12	21.60545	-50	0.339260235	-9.730377e-02	-0.0577707479
##	2018-12-19	21.54871	-100	-0.074961006	1.269208e-01	-0.1273496286
##	2018-12-26	22.22558	-100	-0.217376197	-6.492397e-01	0.0730632212
##	2019-01-02	22.35835	-50	0.019627210	-1.131601e-01	0.1343496017
##	2019-01-09	22.30328	100	0.107098504	-8.612270e-01	0.2247945879
##	2019-01-16	21.96729	100	0.201421078	-4.524448e+00	0.1977441220
##	2019-01-23	21.46988	100	0.265652010	3.042028e-01	0.3050403150
##	2019-01-30	20.02716	100	0.429497538	-6.330843e-01	0.3445775012
##	2019-02-06	19.22638	100	0.672815494	9.811589e-01	0.3295154158
##	2019-02-13	19.10950	100	0.835494245	4.369190e-01	0.2297541329
##	2019-02-20	18.93205	50	0.822909633	3.177962e-01	0.3258080763
##	2019-02-27	19.08630	50	0.901056234	3.634644e-01	0.3606140214
##	2019-03-06	19.22953	50	0.867474557	3.228843e-01	0.2270629328
##	2019-03-13	19.44715	100	0.844846880	-6.295719e-02	0.1333891452
##	2019-03-20	19.78329	100	0.840106208	-2.201156e-02	0.0542256167
##	2019-03-27	20.39456	100	0.861824605	-1.628963e-01	0.1508936871
##	2019-04-03	21.57479	100	0.939366878	-1.147308e-01	0.0548134379
##	2019-04-10	22.47552	50	0.869864360	4.125115e-01	0.1001814386
##	2019-04-17	23.56271	50	0.872287049	-7.684526e-02	0.2330561907
##	2019-04-24	24.85406	100	0.868719475	-1.741898e-01	0.0124652775
##	2019-05-01	24.11878	-50	0.716299897	-1.119076e+00	-0.0164158904
##	2019-05-08	23.43602	-50	0.716541608	1.043255e+00	0.0491871365
##	2019-05-15	22.70592	0	0.695516547	1.345398e+00	0.1675835605
##	2019-05-22	22.66551	50	0.778040473	-1.398616e-01	0.1855981569
##	2019-05-29	21.94054	50	0.682851515	2.553200e-01	0.1203367023
##	2019-06-05	21.51352	-50	0.721931994	-3.762081e-02	0.2626356956

##	2019-06-12	21.61493	100	0.836999541	-3.261398e-01	0.1807923000
##	2019-06-19	22.07474	100	0.943250103	5.831199e-01	0.2263201053
##	2019-06-26	21.62925	-50	0.753774314	7.827295e-01	0.0147814483
##	2019-07-03	20.97103	-100	0.701639548	-4.666438e-02	0.1815626539
##	2019-07-10	20.44637	-50	0.720780498	-1.220197e+00	0.3018481983
##	2019-07-17	20.20523	100	0.773786787	3.195939e-01	0.2760986953
##	2019-07-24	20.20421	100	0.847502652	5.936672e-01	0.3401857792
##	2019-07-31	20.89922	100	0.884713975	-2.272728e+00	0.1774959931
##	2019-08-07	20.48724	-50	0.565724131	7.127434e-01	0.2535802393
##	2019-08-14	20.44387	-50	0.672602542	2.651574e-02	0.0350519995
##	2019-08-21	20.72022	100	0.962354988	-1.913935e-01	0.2104970905
##	2019-08-28	20.12383	50	0.716164421	-2.869319e-02	0.3185978681
##	2019-09-04	19.99316	50	0.898628755	-6.904540e-01	0.3555845338
##	2019-09-11	18.82043	-50	0.358953439	1.181217e+00	0.1686483912
##	2019-09-18	18.39812	-100	0.019739172	1.204907e-01	0.1792495854
##	2019-09-25	17.45117	-50	0.245404637	2.900797e-01	0.2971083402
##	2019-10-02	17.07423	-50	-0.009610798	5.266935e-01	0.1715215654
##	2019-10-09	16.72421	-50	0.103303467	-1.017096e+00	0.2475624807
##	2019-10-16	15.65544	100	0.471496748	1.679062e+01	0.3402470718
##	2019-10-23	14.90029	50	0.230423649	6.015258e-01	0.3034243576
##	2019-10-30	14.07409	-100	0.398752077	-1.315385e+00	0.4192907262
##	2019-11-06	13.14812	-50	0.209450042	-1.166329e-01	0.4580587495
##	2019-11-13	13.64532	50	0.819534719	1.402398e+00	0.4922110479
##	2019-11-20	14.35603	100	0.901944108	-1.013774e+00	0.4435920849
##	2019-11-27	15.05554	100	0.911265684	5.321944e+01	0.3822798312
##	2019-12-04	14.89531	-50	0.708865052	3.863567e-01	0.4408553794
##	2019-12-11	14.68355	-100	0.665749093	4.914906e-01	0.3263583910
##	2019-12-18	14.70827	50	0.710354921	-1.786033e-01	0.1304738606
##	2020-01-08	14.85259	100	0.757666321	-1.331719e-01	0.1642511004
##	2020-01-15	15.58235	100	0.899503237	-5.189561e-01	0.0882538907
##	2020-01-22	16.94328	100	1.065876337	1.956408e+00	0.0439249918
##	2020-01-29	16.88678	-50	0.765768541	-2.804031e-01	-0.1349932207
##	2020-02-05	17.43699	-50	0.961919004	1.073709e-01	0.0069063846
##	2020-02-12	18.16579	100	0.917694726	-5.768544e-01	-0.0721397575
##	2020-02-19	18.94919	100	0.946931584	-5.746179e-01	0.0078376697
##	2020-02-26	17.89892	-50	0.470069873	-5.378560e+00	-0.1674480380
##	2020-03-04	18.00524	-100	0.238744256	2.856663e+00	0.0341065558
##	2020-03-11	19.06776	-100	-0.149421883	2.948644e-01	-0.0184980416
##	2020-03-18	22.01219	-100	-0.417904288	1.537455e+00	0.0735342893
##	2020-03-25	23.93235	-50	-0.109536570	2.210565e-01	0.0425343132
##	2020-04-01	25.35341	100	0.063423078	-1.140292e-01	-0.0356022989
##	2020-04-08	26.03210	100	0.195485634	-2.311705e-01	0.0329679290
##	2020-04-15	26.55276	100	0.227345195	-9.824647e-02	-0.1067769963
##	2020-04-22	27.15117	-50	0.244938628	-2.198614e-01	0.0133896334
##	2020-04-29	26.95076	50	0.347243252	1.181644e-01	0.1279389293
##	2020-05-06	26.67252	100	0.366147785	-2.847455e-01	0.0384140877
##	2020-05-13	27.05793	-50	0.279245903	-3.106028e-01	-0.0779055158
##	2020-05-20	27.41581	-50	0.283905901	-5.509635e-01	-0.1087630878
##	2020-05-27	26.74580	100	0.398363701	-1.802829e+00	0.0629062615
##	2020-06-03	25.42662	100	0.509625916	7.212997e-01	0.1702851741
##	2020-06-10	23.66524	100	0.594217200	-6.013004e-02	0.1359090859
##	2020-06-17	22.35674	50	0.543287669	-2.988927e-02	0.0155422694
##	2020-06-24	21.61221	-100	0.496793286	-2.537194e-01	-0.1307523315
##	2020-07-01	20.83314	-50	0.575320921	1.951625e-01	-0.1928937017
##	2020-07-08	20.31002	50	0.587100167	1.616052e-01	0.0016193154
##	2020-07-15	19.70070	-100	0.628879707	-5.976402e-02	0.1112380676
##	2020-07-22	19.13490	0	0.649829376	3.845989e-01	0.1433150028
##	2020-07-29	19.59967	-100	0.420412555	-3.471684e-01	0.0427116092
##	2020-08-05	20.09672	-100	0.298693125	1.595350e-02	-0.1215241355
##	2020-08-12	20.27594	-50	0.367763601	7.542202e-02	-0.0757126739

##	2020-08-19	20.48307	100	0.323360411	5.991964e-02	-0.1357864046
##	2020-08-26	20.46947	50	0.358376091	-1.363102e-01	-0.2227868453
##	2020-09-02	20.61783	0	0.386697140	-2.389501e-01	-0.0378088610
##	2020-09-09	20.99972	-50	0.215900883	-3.807813e-01	0.0154527972
##	2020-09-16	21.07410	-50	0.292022149	-4.428277e-01	-0.1020604216
##	2020-09-23	22.00506	-50	0.023967790	-7.919103e-01	-0.2373496661
##	2020-09-30	21.60090	50	0.374154935	-5.826559e+00	-0.1805584926
##	2020-10-07	20.74690	100	0.512114366	-2.418471e+00	-0.0695933818
##	2020-10-14	19.39901	100	0.727566033	1.650010e-01	-0.1800264965
##	2020-10-21	18.14540	50	0.651577473	-3.324114e-01	-0.1653125143
##	2020-10-28	17.94394	50	1.023197953	-2.169600e+00	-0.2373001223
##	2020-11-04	18.54592	100	1.204471593	9.682783e-01	-0.3208995018
##	2020-11-11	19.45011	100	1.178048235	-9.765772e-01	-0.2724004735
##	2020-11-18	20.49334	100	1.091781205	-1.354848e+00	-0.3738373224
##	2020-11-25	21.50011	100	1.009877290	-9.483004e+00	-0.4145139170
##	2020-12-02	22.06243	-50	0.912147284	-1.957000e+00	-0.4697868619
##	2020-12-09	22.59419	-50	0.886414812	2.791463e+00	-0.4040688284
##	2020-12-16	23.21405	100	0.865365997	2.370908e-02	-0.3025689144
##	2020-12-23	23.94838	100	0.836942952	-5.344521e-01	-0.4071340748
##	2020-12-30	24.31663	-50	0.780672802	-1.807247e+00	-0.4541160321
##	2021-01-06	23.42366	-100	0.660367921	-5.561435e+00	-0.3539549078
##	2021-01-13	21.87166	-100	0.582481254	-1.652853e-01	-0.1876415900
##	2021-01-20	20.37743	-100	0.537694350	2.295893e-01	-0.0506856562
##	2021-01-27	20.20797	50	0.602653066	-3.985130e+00	-0.1140913968
##	2021-02-03	20.05061	50	0.582044188	-4.824791e-01	-0.1433475932
##	2021-02-10	19.99734	0	0.563662548	-7.717656e-01	-0.1939188831
##	2021-02-17	19.64974	-50	0.514993800	6.961788e-01	-0.0143296314
##	2021-02-24	20.36389	50	0.707847895	5.521700e+00	0.1594255406
##	2021-03-03	21.02703	50	0.687686346	-2.639267e-01	0.2334921506
##	2021-03-10	22.48054	100	1.018918429	-8.649232e-02	0.0968446143
##	2021-03-17	24.11905	100	1.135913593	-3.461337e-01	0.1777502714
##	2021-03-24	25.17971	50	0.978726975	-2.657493e-01	0.1175509993
##	2021-03-31	26.29890	50	0.995505079	2.210461e-02	0.1192655018
##	2021-04-07	27.05168	50	0.895191952	-2.610017e+00	-0.0643123072
##	2021-04-14	28.10727	50	0.969612473	-3.056923e-01	-0.1701026465
##	2021-04-21	29.19601	100	0.957693253	1.915887e-01	-0.0156318602
##	2021-04-28	28.83753	-50	0.777398667	-9.556339e-01	-0.1553859341
##	2021-05-05	28.82774	50	0.848786342	1.465200e+01	-0.0081070649
##	2021-05-12	28.75371	50	0.778121369	-8.577234e-01	-0.1505892224
##	2021-05-19	28.35615	-100	0.740829623	-4.151488e+00	-0.0303665141
##	2021-05-26	28.47153	50	0.811629866	-3.195621e-01	-0.0958681247
##	2021-06-02	28.93570	100	0.853618228	-2.581046e+00	-0.0332963192
##	2021-06-09	29.46827	100	0.843727578	-3.400441e-02	-0.1940334003
##	2021-06-16	29.49910	-50	0.787324336	-7.776731e-02	-0.2152519525
##	2021-06-23	29.25045	-100	0.715428208	1.095683e+00	-0.2416685226
##	2021-06-30	29.39258	-50	0.779148543	-2.244171e-01	-0.1296738717
##	2021-07-07	30.02167	100	0.903103071	1.551233e+00	0.0471198308
##	2021-07-14	30.80153	100	0.944403796	6.412144e-01	-0.0017159425
##	2021-07-21	31.22727	50	0.920135872	1.692713e-01	0.1551338863
##	2021-07-28	31.94864	50	0.950577218	-1.594079e-01	0.2560700111
##	2021-08-04	33.21157	100	1.086924681	2.234190e-04	0.0445096263
##	2021-08-11	34.66311	100	1.089036858	-3.966338e-02	0.0888333008
##	2021-08-18	34.48612	-50	0.861651626	-6.877774e-01	-0.0957623118
##	2021-08-25	34.03547	-100	0.769095049	4.967168e-01	-0.0528320433
##	2021-09-01	33.37273	-100	0.702813987	-2.036240e-01	0.0063602730
##	2021-09-08	32.06149	-100	0.608100848	-7.353276e-01	0.1695874864
##	2021-09-15	30.20318	-100	0.448106840	1.342219e+00	0.2515747134
##	2021-09-22	28.09665	-100	0.358612931	-8.121428e-01	0.2741184561
##	2021-09-29	26.43183	-50	0.384518682	-5.367536e+00	0.2616741890
##	2021-10-06	25.60006	100	0.550235359	-1.622339e+00	0.3698565312

##	2021-10-13	24.91050	100	0.543986447	-3.530228e+00	0.4253767415
##	2021-10-20	25.48771	100	0.920529870	2.986926e-01	0.2373921680
##	2021-10-27	26.87421	100	1.134904444	-1.059796e+00	0.1339114079
##	2021-11-03	28.26491	100	1.085222877	-1.425392e+01	0.2599227067
##	2021-11-10	29.96426	100	1.114828296	9.767023e-01	0.1695303800
##	2021-11-17	31.88541	100	1.123342927	2.769189e-02	0.2928690364
##	2021-11-24	33.42412	50	0.992801567	3.588509e-01	0.2652813658
##	2021-12-01	33.29916	-100	0.816386878	1.325835e+00	0.1450784223
##	2021-12-08	33.48500	-50	0.894469950	-1.254339e-01	0.1582270581
##	2021-12-15	33.15555	50	0.824346773	-6.826569e-03	0.3003520425
##	2021-12-22	33.19790	50	0.846572280	8.729181e-02	0.4192150333
##	2021-12-29	34.10157	100	0.978763525	-1.943745e-02	0.4437188276
##	2022-01-05	34.60943	50	0.877017894	-3.072552e-01	0.2040755134
##	2022-01-12	33.57030	-100	0.705335037	-3.652984e-01	0.1619894374
##	2022-01-19	31.53783	-100	0.559387408	1.255064e-01	-0.0415767409
##	2022-01-26	31.23430	-100	0.152907641	1.407624e+00	-0.1873146266
##	2022-02-02	30.94709	-50	0.242182574	-2.015465e-01	-0.0207075802
##	2022-02-09	30.34006	100	0.276970330	-7.966062e-01	0.1254251432
##	2022-02-16	30.29908	-50	0.143888358	2.556520e-02	0.1918946648
##	2022-02-23	30.58908	-100	0.065887216	3.994405e-01	-0.0007672036
##	2022-03-02	30.24973	50	0.187401343	-5.037570e-01	0.1071816870
##	2022-03-09	29.51015	100	0.258147324	2.504598e-01	0.1662306185
##	2022-03-16	28.44952	100	0.315183617	1.162932e+00	0.2038499198
##	2022-03-23	27.32846	100	0.358808182	-4.620518e-02	-0.0040782866
##	2022-03-30	25.72463	100	0.573186630	4.516112e-02	0.1314802186
##	2022-04-06	25.06603	100	0.756024306	-1.640232e+00	0.1645466941
##	2022-04-13	24.09604	50	0.687908703	7.718534e-02	0.2510242772
##	2022-04-20	23.12516	-100	0.667062444	-5.988545e-02	0.2976360207
##	2022-04-27	21.47575	-100	0.603952561	-1.783267e+00	0.2384374007
##	2022-05-04	20.23070	-100	0.578518080	8.028204e-01	0.3553488622
##	2022-05-11	20.08887	-100	0.325934782	3.214480e-02	0.1530690618
##	2022-05-18	19.95718	-50	0.341940029	-5.618561e-02	-0.0125410353
##	2022-05-25	19.70737	100	0.425957088	-8.559401e-01	0.0849769336
##	2022-06-01	18.42089	100	0.605207967	3.263669e+00	-0.0877121537
##	2022-06-08	17.25970	50	0.594858675	-1.039767e+00	-0.0948429553
##	2022-06-15	17.43368	-100	0.287469660	-2.336165e+01	-0.0635700198
##	2022-06-22	17.59523	-50	0.289268316	1.286916e+00	-0.0194101811
##	2022-06-29	17.09090	100	0.416663222	6.013533e-01	-0.0655864098
##	2022-07-06	16.29551	100	0.489335382	-7.218325e-01	0.0224553112
##	2022-07-13	16.02851	-50	0.321737324	-1.567226e+00	0.0547363879
##	2022-07-20	15.14353	50	0.457675395	7.844265e-01	-0.0215930899
##	2022-07-27	15.14639	100	0.770435728	-3.249667e+00	0.1494699358
##	2022-08-03	15.87503	100	1.041663596	1.931054e-01	0.2216172740
##	2022-08-10	17.08805	100	1.107487975	-4.039318e-01	0.1325653936
##	2022-08-17	18.54959	100	1.101164622	-3.568703e-02	0.2046597877
##	2022-08-24	19.61279	50	0.978071621	-1.147863e+00	0.1404834902
##	2022-08-31	19.42562	-100	0.792402936	1.218127e+00	-0.0023484227
##	2022-09-07	18.65299	-100	0.705813283	-1.742474e-01	0.1418264506
##	2022-09-14	17.58902	-100	0.616876006	8.782412e-01	0.0986168191
##	2022-09-21	16.40723	-100	0.582639083	-9.070821e-01	-0.0968218305
##	2022-09-28	15.43368	-50	0.542023609	-8.361353e+00	0.0212065976
##	2022-10-05	14.79323	50	0.633394422	-4.443695e+00	0.0923379459
##	2022-10-12	14.11794	-50	0.423828013	1.399163e-01	-0.0966436593
##	2022-10-19	13.28942	-50	0.531205742	-1.119344e-01	0.0157301449
##	2022-10-26	13.39493	100	0.611078370	-1.497503e+00	-0.1320575730
##	2022-11-02	13.58997	100	0.630333452	2.903146e+00	-0.2863719303
##	2022-11-09	13.77107	50	0.630778256	-9.676625e-02	-0.3920529091
##	2022-11-16	14.68326	100	0.832574004	-3.839710e-01	-0.4461119195
##	2022-11-23	15.95273	100	0.931032474	-2.018052e-01	-0.3205141759
##	2022-11-30	16.53998	100	0.890733576	4.839489e-01	-0.1089894770

##	emv	macd	mfi	sar	smi	volat
## 2018-01-03	NA	NA	NA	115.3586	NA	NA
## 2018-01-10	NA	NA	NA	115.4054	NA	NA
## 2018-01-17	NA	NA	NA	115.5252	NA	NA
## 2018-01-24	NA	NA	NA	115.9245	NA	NA
## 2018-01-31	NA	NA	NA	116.4665	NA	NA
## 2018-02-07	NA	NA	NA	125.2400	NA	NA
## 2018-02-14	NA	NA	NA	125.2400	NA	NA
## 2018-02-21	NA	NA	NA	124.7388	NA	NA
## 2018-02-28	NA	NA	NA	124.2576	NA	NA
## 2018-03-07	-0.0058799185	NA	NA	123.7957	NA	0.2378317
## 2018-03-14	-0.0034865570	NA	NA	123.3523	NA	0.2396534
## 2018-03-21	-0.0081262406	NA	NA	122.9266	NA	0.2438210
## 2018-03-28	-0.0126815488	NA	NA	122.5180	NA	0.2438491
## 2018-04-04	-0.0128995939	NA	NA	121.8725	NA	0.2588964
## 2018-04-11	0.0028534823	NA	58.92945	121.2657	NA	0.2347659
## 2018-04-18	0.0114631965	NA	58.91397	120.6954	NA	0.2102715
## 2018-04-25	-0.0002943706	NA	53.68865	120.1593	NA	0.1961045
## 2018-05-02	0.0050307541	NA	58.56474	111.7600	NA	0.2072958
## 2018-05-09	0.0109576476	NA	58.26464	111.7600	NA	0.2096722
## 2018-05-16	0.0087410904	NA	63.99454	112.4064	NA	0.2071152
## 2018-05-23	0.0098220310	NA	68.19637	113.3762	NA	0.2009671
## 2018-05-30	0.0160966161	NA	68.45782	114.6589	NA	0.1984168
## 2018-06-06	0.0177771758	NA	73.83002	116.3980	NA	0.1955207
## 2018-06-13	0.0213303861	NA	78.28046	118.7887	NA	0.1803464
## 2018-06-20	0.0164002933	NA	73.31097	121.8857	NA	0.1788406
## 2018-06-27	0.0115290952	NA	76.35607	124.5491	49.8074218	0.1828804
## 2018-07-11	0.0073242512	NA	82.23203	126.8396	50.4150412	0.1822324
## 2018-07-18	0.0048726586	NA	79.45415	128.8095	52.7203529	0.1499739
## 2018-07-25	0.0053170146	NA	83.30596	130.5035	56.2869360	0.1467714
## 2018-08-01	-0.0030635571	NA	72.92171	131.9604	54.7736165	0.1667054
## 2018-08-08	0.0016151041	NA	77.06434	132.6100	54.5330607	0.1653636
## 2018-08-15	0.0019154021	NA	75.06510	133.7720	56.3441879	0.1662480
## 2018-08-22	0.0004694374	NA	73.87555	135.0437	59.0402197	0.1629357
## 2018-08-29	0.0047588354	5.85397763	74.67040	136.5874	61.9693243	0.1629302
## 2018-09-05	0.0123150419	5.84309826	68.37961	138.6059	64.6497855	0.1650939
## 2018-09-12	0.0130281368	5.83770168	68.14414	140.2207	67.3235101	0.1513876
## 2018-09-19	0.0123150585	5.81952076	66.13959	141.8068	69.4366915	0.1481179
## 2018-09-26	0.0145167999	5.80971226	64.77485	143.2836	71.2814361	0.1538378
## 2018-10-03	0.0263231222	5.81291273	71.37037	145.2846	72.7624017	0.1561483
## 2018-10-10	-0.0036954249	5.70075045	68.70481	153.5100	68.2912798	0.1754848
## 2018-10-17	-0.0135425417	5.53021104	63.44545	153.5100	63.6001122	0.1796058
## 2018-10-24	-0.0242868520	5.25231955	55.10719	153.0408	55.9250729	0.2041302
## 2018-10-31	-0.0227164933	4.98191465	58.39630	152.1173	50.4393723	0.2396180
## 2018-11-07	-0.0170376789	4.76592082	70.29447	151.2493	48.0882686	0.2410186
## 2018-11-14	-0.0225212242	4.52199180	63.35178	150.4333	43.6843293	0.2469845
## 2018-11-21	-0.0309551325	4.24478528	57.30334	149.6663	37.8828055	0.2588357
## 2018-11-28	-0.0278413757	4.03549117	60.03102	148.9454	36.1492447	0.2620686
## 2018-12-12	-0.0403709013	3.76973991	51.88967	148.6600	30.5984937	0.2618763
## 2018-12-19	-0.0340813763	3.37005016	49.89023	147.9994	20.6790586	0.2948417
## 2018-12-26	-0.0488082933	2.86840725	44.27331	146.5859	10.7594460	0.3069959
## 2019-01-02	-0.0349911888	2.34938761	45.55601	144.6973	3.3228192	0.3075128
## 2019-01-09	-0.0383175946	1.85553191	45.35874	142.9975	-1.2545483	0.2944110
## 2019-01-16	-0.0422427950	1.41441013	46.05014	141.4678	-3.5879596	0.2686413
## 2019-01-23	-0.0368050514	1.04555251	53.27768	140.0910	-4.3283621	0.2661614
## 2019-01-30	-0.0214382529	0.79738109	59.87509	127.7000	-2.2488281	0.2928734
## 2019-02-06	-0.0221234017	0.70713083	66.23718	127.7000	3.2819103	0.2836786
## 2019-02-13	-0.0098090457	0.77449709	64.92148	128.4356	10.9602023	0.2810487
## 2019-02-20	0.0057858576	0.93483180	58.47509	129.8105	18.6780083	0.2785103
## 2019-02-27	0.0300648950	1.16861740	64.82967	131.1028	26.2888812	0.2407584

##	2019-03-06	0.0246119479	1.42700983	64.26444	132.8866	33.0467681	0.1925054
##	2019-03-13	0.0236625905	1.68631937	62.32939	134.5277	38.9851290	0.1890056
##	2019-03-20	0.0227731965	1.94067032	70.40320	136.4729	44.3981395	0.1806320
##	2019-03-27	0.0248929235	2.20305172	80.23925	138.6950	48.9324544	0.1821178
##	2019-04-03	0.0260340458	2.49628822	87.34675	141.2941	53.0034277	0.1785695
##	2019-04-10	0.0184239163	2.77873239	82.69983	144.6790	56.1781323	0.1128390
##	2019-04-17	0.0171946583	3.05721801	82.44281	147.5224	59.5829308	0.1116332
##	2019-04-24	0.0204710081	3.31679233	82.51102	150.3029	62.1596679	0.1103162
##	2019-05-01	0.0031465398	3.48037296	70.56897	153.3424	61.4252008	0.1683192
##	2019-05-08	0.0045363880	3.58460748	68.25242	155.7739	59.9520396	0.1715197
##	2019-05-15	0.0035953136	3.63953265	59.83386	157.7191	58.3171680	0.1766938
##	2019-05-22	0.0111808422	3.69272108	58.24628	159.2753	58.0911351	0.1757646
##	2019-05-29	0.0006551732	3.69757523	59.50637	159.8700	56.8133002	0.1781555
##	2019-06-05	-0.0049918151	3.69131000	59.61094	159.8700	56.4004323	0.1736136
##	2019-06-12	0.0030683449	3.69532497	66.00135	160.9960	57.0882877	0.1736076
##	2019-06-19	0.0053551689	3.72660867	65.58529	162.1343	58.4479481	0.1780375
##	2019-06-26	-0.0076243946	3.71023632	58.32538	162.8200	57.3929379	0.1829088
##	2019-07-03	0.0040730406	3.66882436	50.08347	162.8200	56.1774145	0.1887240
##	2019-07-10	0.0035969076	3.60976264	50.97254	164.0900	55.1611655	0.1434100
##	2019-07-17	0.0057604197	3.54266453	57.43927	164.5400	54.6744768	0.1392016
##	2019-07-24	-0.0016394326	3.48356079	59.22054	165.3900	55.3401441	0.1331613
##	2019-07-31	0.0088875176	3.41755039	63.20159	166.2252	54.3889480	0.1690267
##	2019-08-07	-0.0080229409	3.32271377	65.97730	172.0000	51.8122997	0.1899008
##	2019-08-14	-0.0092886057	3.20103318	67.12175	172.0000	48.1726524	0.1988312
##	2019-08-21	-0.0105141091	3.11845971	74.20873	171.6736	47.6210789	0.1970221
##	2019-08-28	-0.0062968812	3.03331469	68.48722	171.3603	46.4656719	0.1991355
##	2019-09-04	0.0002847952	2.96798068	72.96750	171.0594	46.5641674	0.1939012
##	2019-09-11	-0.0133262091	2.82885787	64.32459	170.7707	41.8008660	0.2076364
##	2019-09-18	-0.0245318313	2.61155716	59.02036	170.1928	34.3040523	0.2125157
##	2019-09-25	-0.0213591918	2.38871915	60.65939	169.1990	28.7825198	0.2188163
##	2019-10-02	-0.0292961898	2.11908174	58.02920	168.2847	21.1171511	0.2284379
##	2019-10-09	-0.0145628743	1.84733301	64.13307	167.1182	14.3521832	0.2062337
##	2019-10-16	-0.0110237612	1.64043808	64.04401	166.0684	11.7926641	0.1891350
##	2019-10-23	-0.0184796718	1.44070883	58.01463	165.1236	8.0787308	0.1799721
##	2019-10-30	-0.0093332865	1.29314502	59.06898	164.3300	7.4185151	0.1981927
##	2019-11-06	-0.0171898946	1.13883313	48.28246	164.3300	4.8878498	0.1977439
##	2019-11-13	0.0087902542	1.07743904	56.41701	156.6200	7.8261962	0.2032397
##	2019-11-20	0.0234385554	1.09020158	54.99104	156.6200	12.8469809	0.1891523
##	2019-11-27	0.0202051342	1.15448629	54.76994	157.2184	18.7015121	0.1791373
##	2019-12-04	0.0206133241	1.21657560	54.05446	158.0993	22.6352295	0.1711257
##	2019-12-11	0.0192556257	1.25833699	49.12587	158.9273	24.9206198	0.1592214
##	2019-12-18	0.0119392726	1.28532925	58.06426	159.7057	26.7828430	0.1592537
##	2020-01-08	0.0168694618	1.31927770	64.37903	160.4374	29.7832127	0.1575659
##	2020-01-15	0.0190245235	1.38221204	64.26554	161.1251	33.6067813	0.1630110
##	2020-01-22	0.0305860944	1.50868991	73.58812	162.1943	38.4139078	0.1488538
##	2020-01-29	0.0114092436	1.59550671	61.76185	163.9639	38.6742712	0.1547484
##	2020-02-05	0.0111397841	1.72025608	63.35883	165.5565	42.0738922	0.1518349
##	2020-02-12	0.0116658304	1.85207856	70.11731	166.9898	45.3606469	0.1620880
##	2020-02-19	0.0181720099	2.00636974	69.09950	168.6531	48.4621406	0.1633940
##	2020-02-26	-0.0083664484	2.02392272	68.42852	181.7400	42.8215125	0.1804460
##	2020-03-04	-0.0335864177	1.93202815	59.73224	181.7400	35.3025763	0.2196953
##	2020-03-11	-0.0648662431	1.61686855	53.38799	181.0460	21.2968998	0.2593071
##	2020-03-18	-0.2225679313	0.87262828	46.30024	179.0638	2.6695352	0.6684629
##	2020-03-25	-0.1908289357	-0.07023426	53.28126	174.1467	-9.5999263	0.7734127
##	2020-04-01	-0.1698330179	-1.02453077	58.10030	169.6230	-15.4287570	0.7852909
##	2020-04-08	-0.1651070397	-1.84545544	58.29968	165.4612	-16.1665929	0.7868318
##	2020-04-15	-0.1650195727	-2.54721277	58.39190	161.6323	-15.9192181	0.7886954
##	2020-04-22	-0.1723202650	-3.12205320	53.66085	158.1097	-15.2143151	0.7931613
##	2020-04-29	-0.1303562910	-3.50339254	53.77939	154.8689	-12.8102301	0.8028579
##	2020-05-06	-0.1032161443	-3.74948034	62.44615	151.8874	-10.5674866	0.8056244

##	2020-05-13	-0.1004140683	-3.99903125	54.47068	149.1444	-10.7290290	0.8125326
##	2020-05-20	0.0509725521	-4.22822112	43.63864	146.6209	-10.4782351	0.8011045
##	2020-05-27	0.0245575163	-4.31401582	45.49358	145.1300	-7.6122884	0.5238866
##	2020-06-03	0.0236822251	-4.21799591	51.52708	117.6000	-1.6237563	0.3533343
##	2020-06-10	0.0294405165	-3.95595895	58.05208	117.6000	5.2996983	0.3344808
##	2020-06-17	0.0170745322	-3.65320594	60.45427	119.2244	9.8724320	0.3285830
##	2020-06-24	0.0080639810	-3.39580532	64.22670	120.7838	11.3681128	0.3352688
##	2020-07-01	-0.0028334271	-3.12628167	62.14404	122.2809	12.3114354	0.3178972
##	2020-07-08	-0.0100528208	-2.86708236	56.44677	123.7180	12.8477517	0.2941486
##	2020-07-15	0.0177828962	-2.61598090	55.18932	125.0977	13.3560646	0.2815448
##	2020-07-22	0.0186439068	-2.38708824	50.05421	126.4222	13.6357189	0.2286290
##	2020-07-29	-0.0061577447	-2.29345622	44.81512	127.6937	11.2785645	0.2635587
##	2020-08-05	-0.0240158413	-2.31137468	37.38219	128.9144	7.4663431	0.2507700
##	2020-08-12	-0.0372783985	-2.34089279	38.87204	130.0862	4.3044876	0.2443506
##	2020-08-19	-0.0268041253	-2.37873648	40.51403	131.2111	1.1505712	0.2327890
##	2020-08-26	-0.0107668567	-2.40680651	51.18622	132.2911	-1.7668444	0.2349184
##	2020-09-02	-0.0151222293	-2.38984623	49.01592	133.3279	-3.7530341	0.2382594
##	2020-09-09	-0.0179363707	-2.39867817	41.64942	134.3231	-6.1404927	0.2504850
##	2020-09-16	-0.0146114039	-2.41308248	40.83848	135.2786	-8.2330912	0.2588868
##	2020-09-23	-0.0395564906	-2.52739420	40.58919	158.2100	-11.9886267	0.2664298
##	2020-09-30	-0.0170688445	-2.57060155	49.05776	158.2100	-12.5990623	0.2746831
##	2020-10-07	-0.0093418116	-2.51272999	50.75814	157.0304	-10.7401102	0.2424355
##	2020-10-14	-0.0023596892	-2.33475364	56.75170	155.8980	-6.7313937	0.2341242
##	2020-10-21	-0.0074939269	-2.10455537	51.97341	154.8109	-2.6965973	0.2373076
##	2020-10-28	0.0030419062	-1.75755010	60.96690	128.7200	2.6136709	0.2629956
##	2020-11-04	0.0244228148	-1.24936281	74.13712	128.7200	9.5240993	0.2682990
##	2020-11-11	0.0406923783	-0.59025433	81.14972	130.3180	17.7994031	0.2538285
##	2020-11-18	0.0438462407	0.13804146	80.53374	132.8987	25.4888990	0.2413250
##	2020-11-25	0.0710015402	0.87582391	85.04955	136.3612	32.4251634	0.2335786
##	2020-12-02	0.0562893907	1.54996056	76.52042	140.3951	37.7526223	0.2242537
##	2020-12-09	0.0536505097	2.16538887	76.27863	144.0256	42.8085527	0.2158871
##	2020-12-16	0.0478582626	2.72155978	82.00375	147.2930	47.8487424	0.2123720
##	2020-12-23	0.0578852061	3.19914191	81.81903	150.2337	51.4124150	0.2095138
##	2020-12-30	0.0378372422	3.58031025	83.21126	153.5969	53.6947170	0.2086399
##	2021-01-06	0.0007707311	3.81554608	76.07042	156.5565	53.6051450	0.1786629
##	2021-01-13	-0.0161064993	3.90719464	65.07964	159.1609	51.8740692	0.1816754
##	2021-01-20	-0.0260134075	3.87300956	58.70806	161.4528	48.4575259	0.1789656
##	2021-01-27	-0.0087343849	3.78499947	66.14887	162.3500	44.9752275	0.2756788
##	2021-02-03	-0.0055436364	3.67040524	55.46425	164.2592	41.8146044	0.2735836
##	2021-02-10	-0.0064985764	3.53779460	53.91063	165.9393	38.8054166	0.2699993
##	2021-02-17	-0.0135055801	3.39455619	47.39138	166.9400	35.9264012	0.2704929
##	2021-02-24	0.0125499090	3.33504289	48.84039	167.1300	36.3411791	0.2890362
##	2021-03-03	0.0215457968	3.30230080	43.44714	168.4656	37.1255385	0.2894876
##	2021-03-10	0.0550611741	3.35104696	52.58466	169.6409	39.1762271	0.2909792
##	2021-03-17	0.0688145959	3.49260668	53.74342	171.7338	42.6578163	0.2883079
##	2021-03-24	0.0677284502	3.65058731	47.17154	174.4180	45.4625377	0.2863905
##	2021-03-31	0.0523948866	3.82966086	49.26529	176.6727	48.7877040	0.2861198
##	2021-04-07	0.0509740652	3.97833119	47.41258	178.9942	51.1303490	0.1962387
##	2021-04-14	0.0582724328	4.13753281	53.54198	180.8979	53.9400928	0.1992535
##	2021-04-21	0.0642200453	4.31161030	62.28655	183.3763	57.3205725	0.1960096
##	2021-04-28	0.0237202669	4.40738483	57.83542	185.8367	57.8056719	0.2031218
##	2021-05-05	0.0290585904	4.49969419	57.32419	186.6200	59.8690894	0.1867206
##	2021-05-12	0.0102354458	4.53728980	55.91447	188.5280	60.8166281	0.1864192
##	2021-05-19	-0.0013342184	4.53990883	50.08993	189.4400	61.5609147	0.1979861
##	2021-05-26	0.0152959179	4.53986497	54.39245	190.6712	62.7956649	0.1952400
##	2021-06-02	0.0192713782	4.56135901	53.58220	192.0983	64.0318184	0.1825789
##	2021-06-09	0.0233763559	4.58154000	59.74272	194.1792	64.7219314	0.1795292
##	2021-06-16	0.0122038207	4.58050849	52.50041	196.0784	64.8512062	0.1834912
##	2021-06-23	0.0057361305	4.53861278	47.00197	200.5100	63.8322609	0.1782630
##	2021-06-30	0.0193487116	4.49077058	53.88633	200.5100	63.8293249	0.1785742

##	2021-07-07	0.0233027425	4.46973548	52.61806	195.2300	65.0778554	0.1680206
##	2021-07-14	0.0274396907	4.46485315	59.51352	195.2300	66.5436383	0.1509119
##	2021-07-21	0.0310517451	4.45898269	52.99847	195.6372	68.0159596	0.1433922
##	2021-07-28	0.0221691511	4.46127162	54.49545	196.0281	69.6365766	0.1351358
##	2021-08-04	0.0228582817	4.49828568	65.12974	196.7164	71.1761684	0.1313872
##	2021-08-11	0.0249549597	4.57686921	64.14021	198.0711	73.1595271	0.1265923
##	2021-08-18	0.0181805649	4.60438384	61.10704	199.9680	71.4132846	0.1326434
##	2021-08-25	0.0159556219	4.58537538	62.00771	201.6752	68.4237378	0.1237426
##	2021-09-01	0.0101109854	4.51711124	56.22632	203.2117	64.6031486	0.1252469
##	2021-09-08	-0.0078108719	4.39765797	50.65625	204.5945	59.9421600	0.1269280
##	2021-09-15	-0.0154911105	4.20636725	43.53643	217.0400	53.2145054	0.1249177
##	2021-09-22	-0.0191377186	3.95321518	45.27528	217.0400	44.9390608	0.1286449
##	2021-09-29	-0.0186757880	3.67557611	49.46268	216.2908	37.0509621	0.1336332
##	2021-10-06	-0.0173421415	3.43141795	49.67719	215.5716	32.0264345	0.1161318
##	2021-10-13	-0.0203215350	3.21470863	49.78722	214.8811	28.1995483	0.1292913
##	2021-10-20	0.0191326308	3.08059850	48.70102	198.3100	28.5021342	0.1311581
##	2021-10-27	0.0456959735	3.06632720	56.88901	198.3100	31.8492852	0.1373884
##	2021-11-03	0.0536364838	3.14805645	55.08775	199.3680	37.1384585	0.1380462
##	2021-11-10	0.0811051857	3.30563586	54.04901	200.9713	42.5280418	0.1446216
##	2021-11-17	0.1056811299	3.54612324	52.35357	203.4296	48.7361049	0.1458991
##	2021-11-24	0.1077665121	3.79639026	56.30953	206.8016	53.4687266	0.1515843
##	2021-12-01	0.0829036564	3.97487457	52.28891	209.8365	54.4692251	0.1851672
##	2021-12-08	0.0931287466	4.14280596	58.84760	212.5678	57.0676601	0.1869308
##	2021-12-15	0.0845923171	4.28183731	57.44150	215.0261	59.7325453	0.1876739
##	2021-12-22	0.0701839673	4.41084329	65.25283	217.2384	63.2111556	0.1845077
##	2021-12-29	0.1113566480	4.58795688	70.14091	219.7010	66.7473884	0.1909481
##	2022-01-05	0.1013432461	4.73873226	60.59980	223.7973	68.3533541	0.1860289
##	2022-01-12	0.0541609330	4.79521146	54.17019	227.3201	66.1395891	0.1868615
##	2022-01-19	0.0100317092	4.71101572	47.64254	248.9600	59.4093301	0.1904682
##	2022-01-26	-0.0435056423	4.34070080	35.77217	248.9600	44.9586052	0.2498553
##	2022-02-02	-0.0160138698	3.87242962	35.66634	246.9000	32.9867373	0.2479854
##	2022-02-09	-0.0322699403	3.38119811	37.84904	244.9224	23.8364061	0.2231297
##	2022-02-16	-0.0414766288	2.84287559	32.81984	243.0239	14.4329446	0.2274820
##	2022-02-23	-0.0745525630	2.23705812	28.14567	241.2014	3.7685013	0.2392268
##	2022-03-02	-0.1161428707	1.68847179	33.97853	238.5067	-3.7446061	0.2449070
##	2022-03-09	-0.1000544173	1.22584192	41.46931	235.9737	-8.8855429	0.2524530
##	2022-03-16	-0.0638053164	0.85912244	43.39889	233.5927	-12.2615888	0.2724611
##	2022-03-23	-0.0295579963	0.57059914	48.36293	231.3545	-14.8442768	0.2704381
##	2022-03-30	0.0729430791	0.45806196	48.82351	229.2506	-13.1616996	0.2731701
##	2022-04-06	0.0865010939	0.53330038	51.42741	196.2900	-7.1895053	0.2218471
##	2022-04-13	0.0752778614	0.68979066	52.84807	196.2900	-1.1615722	0.2197428
##	2022-04-20	0.0906123148	0.87838858	52.18544	198.0004	4.3220190	0.2189374
##	2022-04-27	0.0907033489	1.04160967	50.87766	199.6424	8.2740918	0.2513723
##	2022-05-04	0.0507983939	1.18407221	58.00602	201.2187	11.7627650	0.2601373
##	2022-05-11	-0.0072554634	1.15781374	49.94635	202.7319	10.1292066	0.2696083
##	2022-05-18	-0.0173787494	1.02357483	42.74791	204.1847	6.9927648	0.2632270
##	2022-05-25	-0.0205005132	0.86517928	48.81256	205.5793	4.1098157	0.2425833
##	2022-06-01	-0.0261150710	0.73741171	54.78810	206.9181	2.2562332	0.2494809
##	2022-06-08	-0.0523072591	0.63873575	49.40391	208.2034	0.7388722	0.2435616
##	2022-06-15	-0.0987600336	0.46817256	42.23852	239.0500	-3.3171213	0.2635004
##	2022-06-22	-0.0975761115	0.26170848	40.75722	239.0500	-7.9676704	0.2774309
##	2022-06-29	-0.0552232764	0.07808347	41.76008	237.7740	-11.4057110	0.2900824
##	2022-07-06	-0.0207310801	-0.04427866	40.88669	236.5490	-12.4694008	0.2651223
##	2022-07-13	-0.0029563710	-0.16757261	32.11020	235.3731	-14.2531208	0.2551082
##	2022-07-20	0.0116732085	-0.24772038	41.25323	234.2442	-14.8480471	0.2424535
##	2022-07-27	0.0659559358	-0.16355326	51.61717	207.1500	-10.3547326	0.2854358
##	2022-08-03	0.1050043520	0.09236925	60.03655	207.1500	-2.9918559	0.2897611
##	2022-08-10	0.1387237829	0.49708483	67.73774	208.6868	5.6218476	0.2863077
##	2022-08-17	0.2151154543	1.02559946	75.98054	211.4656	15.0002321	0.2847957
##	2022-08-24	0.2059584131	1.56593241	77.91541	215.4715	22.5223042	0.2637063

##	2022-08-31	0.1551717945	2.00022430	68.59011	219.1570	25.9818031	0.2527636
##	2022-09-07	0.1216984273	2.32210012	60.11682	222.5477	27.3641572	0.2429298
##	2022-09-14	0.1412644202	2.50246605	56.11143	225.6670	26.3476623	0.2377298
##	2022-09-21	0.1224296090	2.55160400	56.48660	228.5369	23.4555825	0.2368624
##	2022-09-28	0.0513822022	2.52049414	48.76275	230.4200	20.5534487	0.2449987
##	2022-10-05	0.0068947678	2.48315054	49.37151	231.9500	19.4063360	0.2057967
##	2022-10-12	-0.0580849078	2.33670161	44.44786	261.5400	14.9901044	0.1956467
##	2022-10-19	-0.0632957312	2.18641118	49.72869	261.5400	11.4219180	0.1976342
##	2022-10-26	-0.0170720249	2.04957615	51.52422	260.0428	8.1314016	0.2269538
##	2022-11-02	0.0271127138	1.93931202	49.23300	258.6055	5.5463746	0.2606250
##	2022-11-09	0.0476500395	1.86692598	49.20839	257.2257	3.9439594	0.2653165
##	2022-11-16	0.0907484966	1.90671540	48.83463	256.7200	6.2911022	0.2641173
##	2022-11-23	0.1175852942	2.06829101	49.31528	224.1100	11.0998256	0.2624611
##	2022-11-30	0.1214466676	2.30075393	42.97382	224.1100	16.7135176	0.2759187