

RSI2

September 29, 2021

1 RSI(2)

https://stockcharts.com/school/doku.php?id=chart_school:trading_strategies:rsi2

```
[1]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

import warnings
warnings.filterwarnings("ignore")

# fix_yahoo_finance is used to fetch data
import fix_yahoo_finance as yf
yf.pdr_override()
```

```
[2]: # input
symbol = 'AAPL'
start = '2018-01-01'
end = '2019-01-01'

# Read data
df = yf.download(symbol,start,end)

# View Columns
df.head()
```

[*****100%*****] 1 of 1 downloaded

```
[2]:
```

	Open	High	Low	Close	Adj Close	\
Date						
2018-01-02	170.160004	172.300003	169.259995	172.259995	168.987320	
2018-01-03	172.529999	174.550003	171.960007	172.229996	168.957886	
2018-01-04	172.539993	173.470001	172.080002	173.029999	169.742706	
2018-01-05	173.440002	175.369995	173.050003	175.000000	171.675278	
2018-01-08	174.350006	175.610001	173.929993	174.350006	171.037628	

	Volume
Date	

```

2018-01-02  25555900
2018-01-03  29517900
2018-01-04  22434600
2018-01-05  23660000
2018-01-08  20567800

```

```

[3]: # Simple way to do RSI
import talib as ta

df['MA5'] = df['Adj Close'].rolling(5).mean()
df['MA200'] = df['Adj Close'].rolling(200).mean()
df['RSI2'] = ta.RSI(df['Adj Close'], timeperiod=2)
df.head()

```

```

[3]:

```

	Open	High	Low	Close	Adj Close \
Date					
2018-01-02	170.160004	172.300003	169.259995	172.259995	168.987320
2018-01-03	172.529999	174.550003	171.960007	172.229996	168.957886
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2018-01-05	173.440002	175.369995	173.050003	175.000000	171.675278
2018-01-08	174.350006	175.610001	173.929993	174.350006	171.037628

	Volume	MA5	MA200	RSI2
Date				
2018-01-02	25555900	NaN	NaN	NaN
2018-01-03	29517900	NaN	NaN	NaN
2018-01-04	22434600	NaN	NaN	96.385157
2018-01-05	23660000	NaN	NaN	99.370987
2018-01-08	20567800	170.080164	NaN	64.314873

```

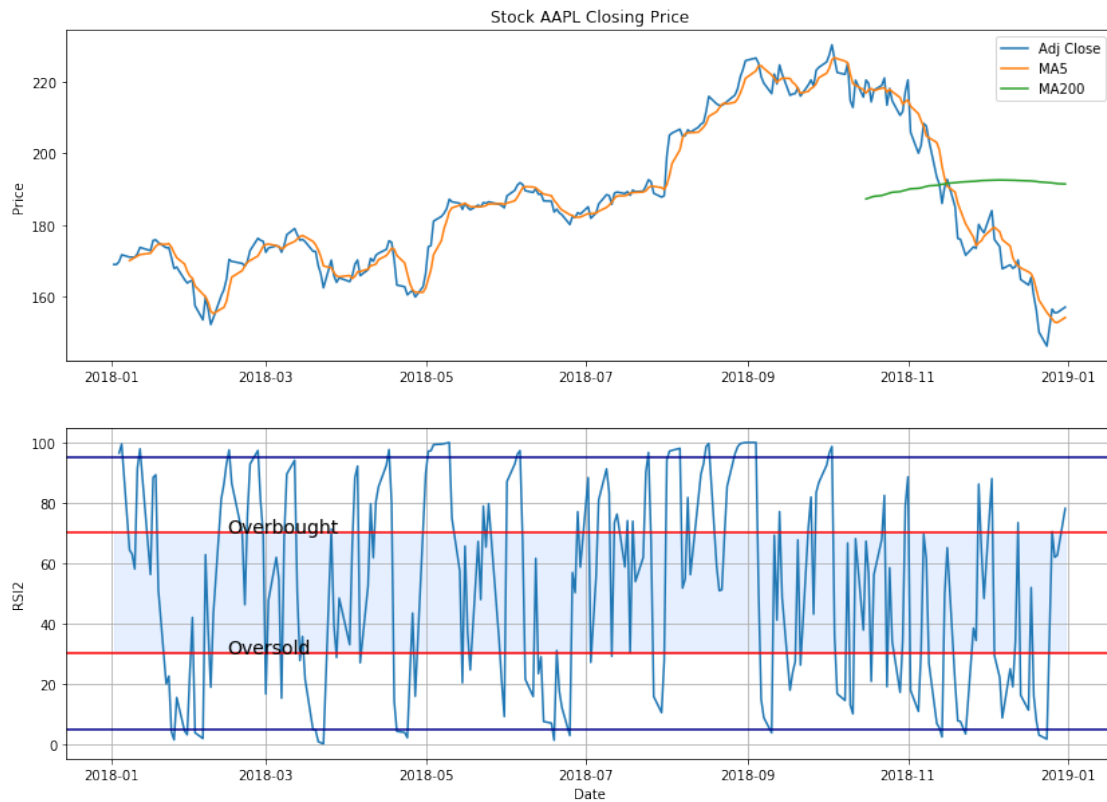
[4]: fig = plt.figure(figsize=(14,10))
ax1 = plt.subplot(2, 1, 1)
ax1.plot(df['Adj Close'])
ax1.plot(df['MA5'], label='MA5')
ax1.plot(df['MA200'], label='MA200')
ax1.set_title('Stock ' + symbol + ' Closing Price')
ax1.set_ylabel('Price')
ax1.legend(loc='best')

ax2 = plt.subplot(2, 1, 2)
ax2.plot(df['RSI2'], label='Relative Strengths Index')
ax2.text(s='Overbought', x=df.RSI2.index[30], y=70, fontsize=14)
ax2.text(s='Oversold', x=df.RSI2.index[30], y=30, fontsize=14)
ax2.axhline(y=70, color='red')
ax2.axhline(y=30, color='red')
ax2.fill_between(df.index, y1=30, y2=70, color='#adccff', alpha='0.3')
ax2.axhline(y=95, color='darkblue')

```

```
ax2.axhline(y=5, color='darkblue')
ax2.grid()
ax2.set_ylabel('RSI2')
ax2.set_xlabel('Date')
```

```
[4]: Text(0.5,0,'Date')
```



1.1 Candlestick with RSI2 Strategy

```
[5]: from matplotlib import dates as mdates
import datetime as dt

dfc = df.copy()
dfc['VolumePositive'] = dfc['Open'] < dfc['Adj Close']
#dfc = dfc.dropna()
dfc = dfc.reset_index()
dfc['Date'] = mdates.date2num(dfc['Date'].astype(dt.date))
dfc.head()
```

```
[5]:      Date      Open      High      Low      Close  Adj Close \
0  736696.0  170.160004  172.300003  169.259995  172.259995  168.987320
```

1	736697.0	172.529999	174.550003	171.960007	172.229996	168.957886
2	736698.0	172.539993	173.470001	172.080002	173.029999	169.742706
3	736699.0	173.440002	175.369995	173.050003	175.000000	171.675278
4	736702.0	174.350006	175.610001	173.929993	174.350006	171.037628

	Volume	MA5	MA200	RSI2	VolumePositive
0	25555900	NaN	NaN	NaN	False
1	29517900	NaN	NaN	NaN	False
2	22434600	NaN	NaN	96.385157	False
3	23660000	NaN	NaN	99.370987	False
4	20567800	170.080164	NaN	64.314873	False

```
[6]: from mpl_finance import candlestick_ohlc

fig = plt.figure(figsize=(14,10))
ax1 = plt.subplot(2, 1, 1)
ax1.plot(df['MA5'], label='MA5')
ax1.plot(df['MA200'], label='MA200')
candlestick_ohlc(ax1,dfc.values, width=0.5, colorup='g', colordown='r', alpha=1.
    ↪0)
ax1.xaxis_date()
ax1.xaxis.set_major_formatter(mdates.DateFormatter('%d-%m-%Y'))
ax1.grid(True, which='both')
ax1.minorticks_on()
ax1v = ax1.twinx()
colors = dfc.VolumePositive.map({True: 'g', False: 'r'})
ax1v.bar(dfc.Date, dfc['Volume'], color=colors, alpha=0.4)
ax1v.axes.yaxis.set_ticklabels([])
ax1v.set_ylim(0, 3*df.Volume.max())
ax1.set_title('Stock ' + symbol + ' Closing Price')
ax1.set_ylabel('Price')
ax1.legend(loc='best')

ax2 = plt.subplot(2, 1, 2)
ax2.plot(df['RSI2'], label='Relative Strengths Index')
ax2.text(s='Overbought', x=df.RSI2.index[30], y=70, fontsize=14)
ax2.text(s='Oversold', x=df.RSI2.index[30], y=30, fontsize=14)
ax2.axhline(y=70, color='red')
ax2.axhline(y=30, color='red')
ax2.fill_between(dfc.Date, y1=30, y2=70, color='#adccff', alpha='0.3')
ax2.axhline(y=95, color='darkblue')
ax2.axhline(y=5, color='darkblue')
ax2.grid()
ax2.set_ylabel('RSI2')
ax2.set_xlabel('Date')
```

```
[6]: Text(0.5,0,'Date')
```

