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from pandas_datareader import data as pdr import json from yahoo_fin import
stock_info as si from pandas import ExcelWriter import numpy as np import
matplotlib.pyplot as plt import yfinance as yf import pandas as pd import
requests import datetime import time

def roc11(closes): print(len(closes)) roc11_val = [] roc14_val = [] roc_sum = []
x = len(closes) for i in range(x): if i+11 == x: # Fixed break # cur_indx = x -
i # temp_11 = (closes[cur_indx] - closes[cur_indx-11])/closes[cur_indx-11]100
temp_11 = (closes[i+11] - closes[i])/closes[i]100 roc11_val.append(temp_11)

for i in range(x):
    if i+14 == x: # Fixed
        break
    temp_14 = (closes[i+14] - closes[i])/closes[i]*100
    roc14_val.append(temp_14)

for i in range(len(roc14_val)):
    roc_sum.append(roc11_val[i+3]+roc14_val[i])
print("Finished ")
return roc_sum

def wma10(roc_sum, n=10): roc_sum = pd.DataFrame(roc_sum,
columns=['COPPOCK']) weights = np.arange(1, n+1) wmas = roc_sum.rolling(n).apply(lambda
x:np.dot(x, weights)/weights.sum(), raw=True)

print(wmas)
return wmas

yf.pdr_override()

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stocklist = si.tickers_sp500()

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stock_file = open("./symbols_backup.txt", "r") stocklist = stock_file.readlines()
stock_file.close() index_name = '^GSPC' # S&P 500

final = [] index = [] n = -1 f = open("./Samples/SHOP/2020-01-
22/SHOP0.vezpal2") a = json.load(f)

pred_stock = a[1]

for stock in pred_stock: n += 1 time.sleep(1)

print ("\npulling {} with index {}".format(stock, n))

# RS_Rating
start_date = datetime.datetime.now() - datetime.timedelta(days=365)
end_date = datetime.date.today()
#
# df = pdr.get_data_yahoo(stock, start=start_date, end=end_date)

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# df['Percent Change'] = df['Adj Close'].pct_change()
# stock_return = df['Percent Change'].sum() * 100
#
# index_df = pdr.get_data_yahoo(index_name, start=start_date, end=end_date)
# index_df['Percent Change'] = index_df['Adj Close'].pct_change()
# index_return = index_df['Percent Change'].sum() * 100
#
# RS_Rating = round((stock_return / index_return) * 10, 2)
#
# sma = [50, 150, 200]
# for x in sma:
#     df["SMA_"+str(x)] = round(df.iloc[:,4].rolling(window=x).mean(), 2)

# currentClose = df["Adj Close"][-1]
# moving_average_50 = df["SMA_50"][-1]
# moving_average_150 = df["SMA_150"][-1]
# moving_average_200 = df["SMA_200"][-1]
# low_of_52week = min(df["Adj Close"][-260:])
# high_of_52week = max(df["Adj Close"][-260:])
# closePrice = df["Close"]
closePrice = pred_stock
# print(closePrice.head())

roc_res = roc11(closePrice)
wma_res = wma10(roc_res)
print(len(wma_res));
print(len(closePrice));
print(closePrice.index)
entry_buy = []
entry_sell= []
entry_date = []

for i in range(len(wma_res)):
    # mark_1 = sum(wma_res["COPPOCK"][i:i+3])
    if ( i+2 < len(wma_res)):
        mark_1 = wma_res["COPPOCK"][i]
        mark_2 = wma_res["COPPOCK"][i+1]
        mark_3 = wma_res["COPPOCK"][i+2]
        if (mark_2 < mark_1 and mark_2 < mark_3):
            # entry_date.append(closePrice.index[-237:][i])
            entry_buy.append(i)
            print(i)
            # print(entry_date)

    if (mark_2 > mark_1 and mark_2 > mark_3):
        # entry_date.append(closePrice.index[-237:][i])

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        entry_sell.append(i)
        print(i)
        # print(entry_date)

# wma_res['Date'] = closePrice.index[-237:]
ax1 = plt.subplot(211)
plt.title("COPPOCK Indicator "+str(stock))
# for i in entry_points:
#     plt.vlines(x=closePrice[-237:][i], ymin=0, ymax=max(closePrice))
plt.plot(closePrice, markevery=entry_buy, marker="^", ms=4, mfc="y")
plt.plot(closePrice, markevery=entry_sell, marker="v", ms=4, mfc="r")

ax2 = plt.subplot(212, sharex=ax1)
# plt.axhline(y=0, color='r')
# plt.plot(closePrice.index[-len(wma_res):], wma_res, markevery=entry_sell, marker="o")
# plt.plot(closePrice.index[-len(wma_res):], wma_res, markevery=entry_buy, marker="x")
# plt.show()
# plt.savefig("./screening_result/pred.png")
plt.savefig("./screening_result/"+str(stock)+".png", dpi=1200)
plt.close()

```

writer = ExcelWriter("ScreenOutput.xlsx")

exportList.to_excel(writer, "Sheet1")

writer.save()