```
import statistics as stats
from math import *
from pandas import *
from pandas_datareader import data
from matplotlib.pyplot import *

set_option ("display.max_rows", 20000)
set_option ("display.max_columns", 1000)
set_option ("display.width", 1000)

start_date = "2014-01-01"
end_date = "2020-02-22"
google_data = data.DataReader( "GOOG", "yahoo", start_date, end_date )

time_period = 20
history = []
sma_values = []
stddev_values = []

for close_price in google_data ["Adj Close"]:
    history.append(close_price)
    if len (history) > time_period:
        del (history [0])

    sma = stats.mean(history)
    sma_values.append(sma)

    variance = 0

    for hist_price in history:
        variance = variance + ((hist_price - sma) ** 2)

    stdev = sqrt (variance / len (history))
    stddev_values.append(stdev)

google_data = google_data.assign(StandardDeviationOver20Days= Series(stddev_values,
index=google_data.index))

stddev = google_data ["StandardDeviationOver20Days"]
Adj_Close = google_data ["Adj Close"]

fig = figure ()
ax1 = fig.add_subplot (211, ylabel= "Google Price in $")
Adj_Close.plot  (ax=ax1, color= "g", lw= 2., legend= True)
ax2 = fig.add_subplot (212, ylabel= "Stddev in $")
stddev.plot (ax=ax2, color= "b", lw= 2., legend= True)
print (google_data)
legend ()
show ()
```