

Hackermen's Stocksale



Table of contents

1. The idea
2. The code
3. The result
4. Improvements
5. Acknowledgments



The Idea



1. Select company
2. Chose cap
3. Get informed
4. Make decision
5. Contact broker



Step 1: Get the stock data

API = Application
programming interface

A screenshot of the Alpha Vantage website. The background is a dark image of a circuit board. The word 'ALPHA VANTAGE' is prominently displayed in large white letters. Below it is a bulleted list of features:

- ▶ Free APIs in JSON and CSV formats
- ▶ Realtime and historical equity data
- ▶ Bitcoin & other digital currencies
- ▶ 50+ technical indicators
- ▶ Chart-ready time series

At the bottom, there are two buttons: 'API DOCUMENTATION + EXAMPLES' and 'GET YOUR FREE API KEY TODAY'.

Step 2: Choose an index

SMI = Swiss market index



Step 3: Choose a broker

Robin Hood Trading



The Code

2

1. Importing modules

2. Keep it running

```
1  from alpha_vantage.timeseries import TimeSeries
2  from pprint import pprint
3  import matplotlib.pyplot as plt
4  import time, threading
5  import smtplib
6
7  def timekeep():
8      '''this is interval function. This function keep time exactly.'''
9      time.sleep(60)
10
```

```
11 company = str(input("which company's shares do you want to buy? "))
12 def company_selector(company):
13     '''this function works as a symbol translator to later feed the API with the necessary string to receive the real-time data.''''
14     symbol = ''
15     while symbol == '':
16         if company == "ABB":
17             symbol = "ABBN"
18         elif company == "Apple":
19             symbol = "AAPL"
20         elif company == "Alcon":
21             symbol = "ALC"
22         elif company == "Credit Suisse":
23             symbol = "CSGN"
24         elif company == "Geberit":
25             symbol = "GEBN"
26         elif company == "Givadaun":
27             symbol = "GIVN"
28         elif company == "LafargeHolcim":
29             symbol = "LHN"
30         elif company == "Lonza":
31             symbol = "LONN"
32         elif company == "Nestlé":
33             symbol = "NESN"
34         elif company == "Novartis":
35             symbol = "NOVN"
36         elif company == "Richemont":
37             symbol = "CFR"
38         elif company == "Roche":
39             symbol = "ROG"
40         elif company == "SGS":
41             symbol = "SGSN"
42         elif company == "Sika":
43             symbol = "SIKA"
44         elif company == "Swatch Group":
45             symbol = "UHR"
```

```
63 def getStockPrice():
64     '''This function screens the market for the current price of the priorly selected stock'''
65     current_time = time.time()
66     ts = TimeSeries(key='YOUR_API_KEY', output_format='pandas') #define API
67     data, meta_data = ts.get_intraday(symbol=company_selector(company),interval='1min', outputsize='full') #get API data for 1min
68     data2 = data.tail(1)    #get most recent Stock price
69     closePandas = data2["4. close"]
70     closePrice = closePandas[0]
71     #pprint(closePandas[0])    #test print
72     #print(type(closePrice))   #test print
73     return closePrice
```


The Result

3



Improvements

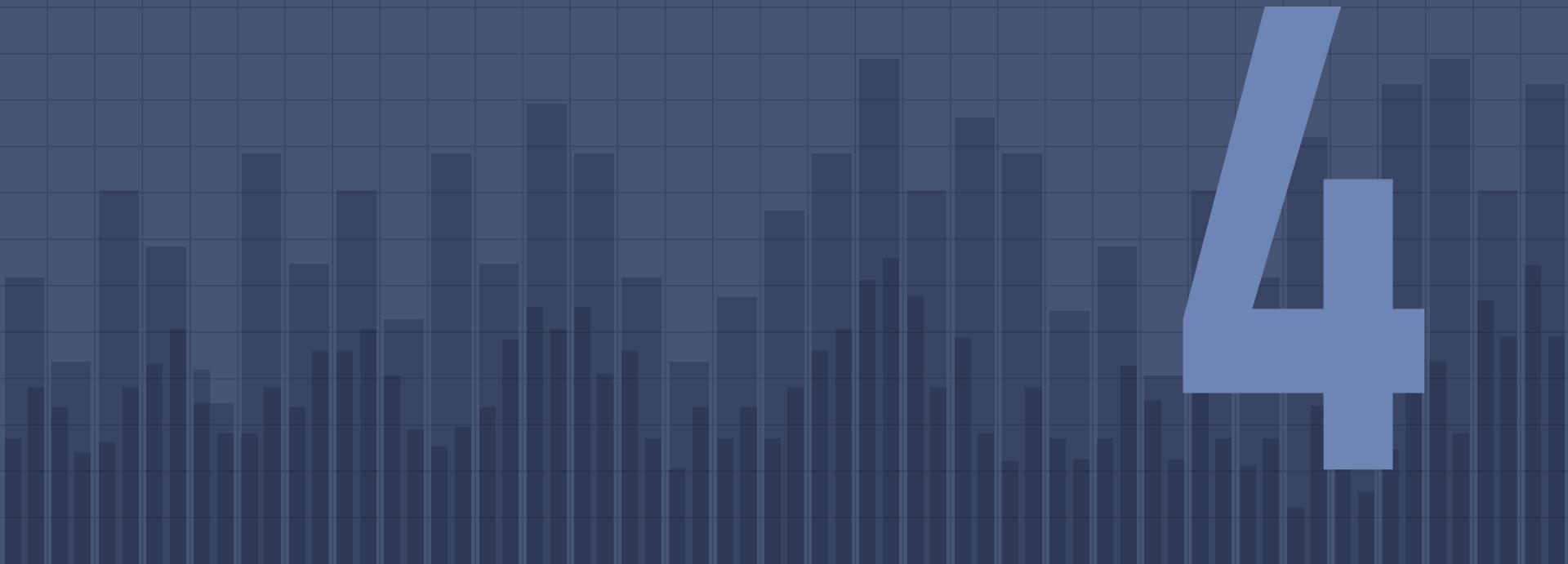


Table of contents

1. Giving additional information about the stocks conditions (i.e. Volatility)
2. Giving the user the opportunity to screen for multiple instruments
3. Giving the user the opportunity to send a «stop» message to interrupt the email service

Acknowledgements



Instructor Bao Yang



Nicolas Breitkreuz



Kenta Sugaya

5