data-pipelining-with-polygon

August 21, 2025

1 Data Pipelining With Polygon

1.1 Python Imports

```
[1]: # Standard Library
     import datetime
     import io
     import os
     import random
     import sys
     import warnings
     from datetime import datetime, timedelta
     from pathlib import Path
     # Data Handling
     import numpy as np
     import pandas as pd
     # Data Visualization
     import matplotlib.dates as mdates
     import matplotlib.pyplot as plt
     import matplotlib.ticker as mtick
     import seaborn as sns
     from matplotlib.ticker import FormatStrFormatter, FuncFormatter, MultipleLocator
     # Data Sources
     import yfinance as yf
     # Statistical Analysis
     import statsmodels.api as sm
     # Machine Learning
     from sklearn.decomposition import PCA
     from sklearn.preprocessing import StandardScaler
     # Suppress warnings
     warnings.filterwarnings("ignore")
```

1.2 Add Directories To Path

```
[2]: # Add the source subdirectory to the system path to allow import config from
     ⇔settings.py
     current_directory = Path(os.getcwd())
     website_base_directory = current_directory.parent.parent.parent
     src directory = website base directory / "src"
     sys.path.append(str(src_directory)) if str(src_directory) not in sys.path else_
     # Import settings.py
     from settings import config
     # Add configured directories from config to path
     SOURCE_DIR = config("SOURCE_DIR")
     sys.path.append(str(Path(SOURCE_DIR))) if str(Path(SOURCE_DIR)) not in sys.path_
      ⇔else None
     # Add other configured directories
     BASE_DIR = config("BASE_DIR")
     CONTENT_DIR = config("CONTENT_DIR")
     POSTS_DIR = config("POSTS_DIR")
     PAGES_DIR = config("PAGES_DIR")
     PUBLIC_DIR = config("PUBLIC_DIR")
     SOURCE_DIR = config("SOURCE_DIR")
     DATA_DIR = config("DATA_DIR")
     DATA_MANUAL_DIR = config("DATA_MANUAL_DIR")
     # Print system path
     for i, path in enumerate(sys.path):
         print(f"{i}: {path}")
    0: /usr/lib/python313.zip
    1: /usr/lib/python3.13
    2: /usr/lib/python3.13/lib-dynload
```

3:

- 4: /home/jared/python-virtual-envs/general_313/lib/python3.13/site-packages
- 5: /home/jared/Cloud_Storage/Dropbox/Websites/jaredszajkowski.github.io/src

1.3 Track Index Dependencies

```
[3]: # Create file to track markdown dependencies
     dep_file = Path("index_dep.txt")
     dep_file.write_text("")
```

[3]: 0

1.4 Python Functions

```
[4]: from export_track_md_deps import export_track_md_deps from polygon_fetch_full_history import polygon_fetch_full_history from polygon_pull_data import polygon_pull_data
```

1.5 Function Usage

1.5.1 Polygon Fetch Full History

```
[5]: from load_api_keys import load_api_keys
     from polygon import RESTClient
     # Load API keys from the environment
     api_keys = load_api_keys()
     # Get the environment variable for where data is stored
     DATA_DIR = config("DATA_DIR")
     # Open client connection
     client = RESTClient(api_key=api_keys["POLYGON_KEY"])
     # Create an empty DataFrame
     df = pd.DataFrame({
         'Date': pd.Series(dtype="datetime64[ns]"),
         'open': pd.Series(dtype="float64"),
         'high': pd.Series(dtype="float64"),
         'low': pd.Series(dtype="float64"),
         'close': pd.Series(dtype="float64"),
         'volume': pd.Series(dtype="float64"),
         'vwap': pd.Series(dtype="float64"),
         'transactions': pd.Series(dtype="int64"),
         'otc': pd.Series(dtype="object")
     })
     # Example usage - minute
     df = polygon_fetch_full_history(
         client=client,
         ticker="AMZN",
         timespan="day",
         multiplier=1,
         adjusted=True,
         full_history_df=df,
         current_start=datetime(2025, 1, 1),
         free tier=True,
         verbose=True,
     )
```

New data:

116	w data.							
		Date	open	high	low	close	volume	\
0	2025-01-02	05:00:00	222.030	225.1500	218.19	220.22	33956579.0	
1	2025-01-03	05:00:00	222.505	225.3600	221.62	224.19	27515606.0	
2	2025-01-06	05:00:00	226.780	228.8350	224.84	227.61	31849831.0	
3	2025-01-07	05:00:00	227.900	228.3810	221.46	222.11	28084164.0	
4	2025-01-08	05:00:00	223.185	223.5200	220.20	222.13	25033292.0	
5	2025-01-10	05:00:00	221.460	221.7100	216.50	218.94	36811525.0	
6	2025-01-13	05:00:00	218.060	219.4000	216.47	218.46	27262655.0	
7	2025-01-14	05:00:00	220.440	221.8200	216.20	217.76	24711650.0	
8	2025-01-15	05:00:00	222.830	223.5700	220.75	223.35	31291257.0	
9	2025-01-16	05:00:00	224.420	224.6500	220.31	220.66	24757276.0	
10	2025-01-17	05:00:00	225.840	226.5100	223.08	225.94	42370123.0	
11	2025-01-21	05:00:00	228.900	231.7800	226.94	230.71	39951456.0	
12	2025-01-22	05:00:00	232.020	235.4400	231.19	235.01	41448217.0	
13	2025-01-23	05:00:00	234.100	235.5200	231.51	235.42	26404364.0	
14	2025-01-24	05:00:00	234.500	236.4000	232.93	234.85	25890738.0	
15	2025-01-27	05:00:00	226.210	235.6100	225.86	235.42	49428332.0	
16	2025-01-28	05:00:00	234.290	241.7700	233.98	238.15	41587188.0	
17	2025-01-29	05:00:00	239.015	240.3900	236.15	237.07	26091716.0	
18	2025-01-30	05:00:00	237.140	237.9500	232.22	234.64	32020728.0	
19	2025-01-31	05:00:00	236.500	240.2900	236.41	237.68	36162377.0	
20	2025-02-03	05:00:00	234.060	239.2500	232.90	237.42	37285868.0	
21	2025-02-04	05:00:00	239.010	242.5200	238.03	242.06	29713812.0	
22	2025-02-05	05:00:00	237.020	238.3200	235.20	236.17	38832042.0	
23	2025-02-06	05:00:00	238.010	239.6599	236.01	238.83	60897095.0	
24	2025-02-07	05:00:00	232.500	234.8100	228.06	229.15	77539276.0	
25	2025-02-10	05:00:00	230.545	233.9200	229.20	233.14	35419926.0	
26	2025-02-11	05:00:00	231.920	233.4400	230.13	232.76	23713726.0	
27	2025-02-12	05:00:00	230.460	231.1800	228.16	228.93	32285249.0	
28	2025-02-13	05:00:00	228.850	230.4200	227.52	230.37	31346512.0	
29	2025-02-14	05:00:00	229.200	229.8900	227.23	228.68	27031084.0	
30	2025-02-18	05:00:00	228.820	229.3000	223.72	226.65	42975133.0	
31	2025-02-19	05:00:00	225.520	226.8300	223.71	226.63	28566709.0	
32	2025-02-20	05:00:00	224.775	225.1300	221.81	222.88	30001665.0	
33	2025-02-21	05:00:00	223.280	223.3100	214.74	216.58	55323850.0	
34	2025-02-24	05:00:00	217.450	217.7150	212.42	212.71	42387585.0	
35	2025-02-25	05:00:00	211.630	213.3400	204.16	212.80	58957977.0	
36	2025-02-26	05:00:00	214.940	218.1600	213.09	214.35	39120603.0	
37	2025-02-27	05:00:00	218.350	219.9700	208.37	208.74	40548571.0	
38	2025-02-28	05:00:00	208.650	212.6200	206.99	212.28	51771737.0	

vwap transactions otc 0 221.2745 449631 None 1 223.7050 346976 None

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227.0921
                      410686
2
                              None
3
    223.4033
                      379570
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4
    222.0414
                      325539
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5
    218.8640
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7
    218.6245
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8
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                      353985
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9
    221.8942
                      313323
                               None
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    234.4587
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16
    238.6365
                      542344
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                      384889
17
    237.4141
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18
    235.0230
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                              None
19
    238.2019
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20
    236.6088
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21
    241.1698
                      412003
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22
    236.5720
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    235.7527
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24
    230.4527
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25
    232.4151
                      473182
                              None
26
    232.1101
                      329473
                              None
27
    229.6079
                      400325
                               None
28
    229.3312
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29
    228.6543
                      375369
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30
    225.8082
                      600702
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    222.9351
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    217.7122
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    215.4418
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Combined data:
                                                                     volume
                   Date
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   2025-01-02 05:00:00
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                                    225.1500
                                               218.19
                                                        220.22
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   2025-01-03 05:00:00
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                                                                 27515606.0
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2
   2025-01-06 05:00:00
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2025-01-16 05:00:00
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10 2025-01-17 05:00:00
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15 2025-01-27 05:00:00
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19 2025-01-31 05:00:00
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21 2025-02-04 05:00:00
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31 2025-02-19 05:00:00
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32 2025-02-20 05:00:00
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33 2025-02-21 05:00:00
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34 2025-02-24 05:00:00
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35 2025-02-25 05:00:00
                         211.630
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36 2025-02-26 05:00:00
                         214.940
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                                                               39120603.0
37 2025-02-27 05:00:00
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38 2025-02-28 05:00:00
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                                              206.99
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                                                               51771737.0
                               otc
        vwap
              transactions
0
    221.2745
                     449631
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    223.4033
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    218.8640
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    218.1426
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7
    218.6245
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    222.6690
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661486

None

None

None

None

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None

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16 238.6365
                   542344 None
17 237.4141
                   384889 None
                   428122 None
18 235.0230
19 238.2019
                   435388 None
20 236.6088
                   551855 None
21 241.1698
                   412003 None
22 236.5720
                   552144 None
23 235.7527
                   803119 None
24 230.4527
                   943441 None
25 232.4151
                   473182 None
26 232.1101
                   329473 None
27 229.6079
                   400325 None
28 229.3312
                   408846 None
29 228.6543
                   375369
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30 225.8082
                   600702 None
31 225.3773
                   391423 None
32 222.9351
                   447333 None
33 217.7122
                   774966 None
34 214.0526
                   586136 None
35 209.6983
                   800750 None
36 215.4418
                   508442 None
37 212.3725
                   558788 None
38 210.4030
                   540930 None
```

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2025-03-01 00:00:00 thru 2025-04-30 00:00:00 for AMZN...

		Date	open	high	low	close	volume	\
0	2025-03-03	05:00:00	213.352	214.0100	202.5500	205.02	42948447.0	
1	2025-03-04	05:00:00	200.110	206.8000	197.4320	203.80	60853084.0	
2	2025-03-05	05:00:00	204.800	209.9800	203.2600	208.36	38610085.0	
3	2025-03-06	05:00:00	204.400	205.7700	198.3015	200.70	49863755.0	
4	2025-03-07	05:00:00	199.490	202.2653	192.5300	199.25	59802821.0	
5	2025-03-10	04:00:00	195.600	196.7300	190.8500	194.54	62350926.0	
6	2025-03-11	04:00:00	193.900	200.1800	193.4000	196.59	54002880.0	
7	2025-03-12	04:00:00	200.720	201.5200	195.2900	198.89	43679284.0	
8	2025-03-13	04:00:00	198.165	198.8799	191.8200	193.89	41270761.0	
9	2025-03-14	04:00:00	197.410	198.6500	195.3200	197.95	38096663.0	
10	2025-03-17	04:00:00	198.770	199.0000	194.3247	195.74	47341752.0	
11	2025-03-18	04:00:00	192.520	194.0000	189.3800	192.82	40414867.0	
12	2025-03-19	04:00:00	193.380	195.9650	191.9600	195.54	39442878.0	
13	2025-03-20	04:00:00	193.070	199.3200	192.3000	194.95	38921113.0	
14	2025-03-21	04:00:00	192.900	196.9900	192.5200	196.21	60056917.0	
15	2025-03-24	04:00:00	200.000	203.6400	199.9500	203.26	41625365.0	
16	2025-03-25	04:00:00	203.595	206.2100	203.2200	205.71	31171161.0	
17	2025-03-26	04:00:00	205.835	206.0100	199.9250	201.13	32990973.0	

18	2025-03-27	04:00:00	200.890	203.7900	199.2821	201.36	27317661.0	
19	2025-03-28	04:00:00	198.420	199.2600	191.8810	192.72	52548226.0	
20	2025-03-31	04:00:00	188.190	191.3300	184.4000	190.26	63547558.0	
21	2025-04-01	04:00:00	187.860	193.9300	187.2000	192.17	41267315.0	
22	2025-04-02	04:00:00	187.660	198.3400	187.6600	196.01	53679198.0	
23	2025-04-03	04:00:00	182.995	184.1300	176.9200	178.41	95553617.0	
24	2025-04-04	04:00:00	167.145	178.1436	166.0000	171.00	123159359.0	
25	2025-04-07	04:00:00	162.000	183.4099	161.3800	175.26	109327115.0	
26	2025-04-08	04:00:00	185.230	185.9000	168.5700	170.66	87710360.0	
27	2025-04-09	04:00:00	172.115	192.6500	169.9300	191.10	116804328.0	
28	2025-04-10	04:00:00	185.440	186.8692	175.8518	181.22	68302045.0	
29	2025-04-11	04:00:00	179.930	185.8600	178.0000	184.87	50594339.0	
30	2025-04-14	04:00:00	186.840	187.4400	179.2300	182.12	48002540.0	
31	2025-04-15	04:00:00	181.410	182.3500	177.9331	179.59	43641952.0	
32	2025-04-16	04:00:00	176.290	179.1046	171.4100	174.33	51875316.0	
33	2025-04-17	04:00:00	176.000	176.2100	172.0000	172.61	44726453.0	
34	2025-04-21	04:00:00	169.600	169.6000	165.2850	167.32	48126111.0	
35	2025-04-22	04:00:00	169.845	176.7800	169.3500	173.18	56607202.0	
36	2025-04-23	04:00:00	183.450	187.3800	180.1900	180.60	63470149.0	
37	2025-04-24	04:00:00	180.915	186.7400	180.1800	186.54	43763196.0	
38	2025-04-25	04:00:00	187.620	189.9400	185.4900	188.99	36414330.0	
39	2025-04-28	04:00:00	190.105	190.2200	184.8850	187.70	33224732.0	
40	2025-04-29	04:00:00	183.990	188.0158	183.6800	187.39	41667255.0	
41	2025-04-30	04:00:00	182.170	185.0500	178.8500	184.42	55176543.0	

	vwap	transactions	otc	
0	207.4103	666781	None	
1	201.9283	872022	None	
2	207.0552	514659	None	
3	201.4563	688561	None	
4	197.6619	785672	None	
5	193.5839	902822	None	
6	196.8215	668549	None	
7	198.8820	573896	None	
8	194.3326	588538	None	
9	197.4359	470644	None	
10	196.4612	568556	None	
11	192.0851	554394	None	
12	194.2885	445698	None	
13	195.6360	455391	None	
14	195.3015	394836	None	
15	202.3699	515880	None	
16	205.1037	402368	None	
17	202.2164	450177	None	
18	201.8553	363321	None	
19	193.9820	678645	None	
20	188.2800	769862	None	
21	191.4704	528168	None	

```
22 194.2870
                     710850
                             None
23
    180.3426
                    1447903
                             None
    173.2162
24
                    1529094
                             None
25
    172.6690
                    1420152
                             None
26
    176.4128
                    1146023
                             None
27
    182.3345
                    1310706
                              None
28
    181.6510
                     925662
                              None
29
    182.6453
                     638386
                              None
30
    182.9501
                     656762
                             None
31
    180.0701
                     564759
                             None
32
    174.8524
                     685436
                              None
33
    173.5808
                     527949
                              None
34
                     726774
    166.9255
                              None
35
    173.2470
                     617509
                              None
36
    183.1208
                     732657
                              None
37
    184.8801
                     516092
                             None
38
    187.9963
                     489570
                             None
39
    187.4701
                     452721
                             None
40
    186.2911
                     507603
                             None
    182.7658
                     688982
41
                             None
Combined data:
                   Date
                             open
                                       high
                                                  low
                                                         close
                                                                    volume
   2025-01-02 05:00:00
                         222.030
                                   225.1500
                                             218.190
                                                       220.22
                                                                33956579.0
  2025-01-03 05:00:00
                         222.505
1
                                   225.3600
                                              221.620
                                                       224.19
                                                                27515606.0
2 2025-01-06 05:00:00
                         226.780
                                   228.8350
                                              224.840
                                                       227.61
                                                                31849831.0
3
  2025-01-07 05:00:00
                         227.900
                                   228.3810
                                              221.460
                                                       222.11
                                                                28084164.0
  2025-01-08 05:00:00
                                                       222.13
                                                                25033292.0
                         223.185
                                   223.5200
                                              220.200
                           •••
76 2025-04-24 04:00:00
                         180.915
                                   186.7400
                                              180.180
                                                       186.54
                                                                43763196.0
77 2025-04-25 04:00:00
                         187.620
                                   189.9400
                                              185.490
                                                       188.99
                                                                36414330.0
78 2025-04-28 04:00:00
                         190.105
                                   190.2200
                                              184.885
                                                       187.70
                                                                33224732.0
79 2025-04-29 04:00:00
                         183.990
                                   188.0158
                                              183.680
                                                       187.39
                                                                41667255.0
80 2025-04-30 04:00:00
                         182.170
                                   185.0500
                                              178.850
                                                       184.42
                                                                55176543.0
        vwap
              transactions
                               otc
0
    221.2745
                     449631
                              None
1
    223.7050
                     346976
                              None
2
    227.0921
                     410686
                              None
3
    223.4033
                     379570
                             None
4
    222.0414
                     325539
                             None
. .
76
    184.8801
                     516092
                              None
77
    187.9963
                     489570
                              None
78
    187.4701
                     452721
                              None
79
    186.2911
                     507603
                              None
    182.7658
                     688982
                             None
```

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2025-04-29 00:00:00 thru 2025-06-28 00:00:00 for AMZN...

ие	w data:							
		Date	open	high	low	close	volume	\
0	2025-04-29	04:00:00	183.990	188.015800	183.6800	187.39	41667255.0	
1	2025-04-30	04:00:00	182.170	185.050000	178.8500	184.42	55176543.0	
2	2025-05-01	04:00:00	190.630	191.807112	187.5000	190.20	74265963.0	
3	2025-05-02	04:00:00	191.435	192.880000	186.4000	189.98	77903487.0	
4	2025-05-05	04:00:00	186.510	188.180000	185.5300	186.35	35217469.0	
5	2025-05-06	04:00:00	184.570	187.930000	183.8500	185.01	29314055.0	
6	2025-05-07	04:00:00	185.560	190.990000	185.0100	188.71	44002926.0	
7	2025-05-08	04:00:00	191.430	194.330000	188.8200	192.08	41043620.0	
8	2025-05-09	04:00:00	193.375	194.690000	191.1600	193.06	29663143.0	
9	2025-05-12	04:00:00	210.710	211.660000	205.7500	208.64	75205042.0	
10	2025-05-13	04:00:00	211.080	214.840000	210.1000	211.37	56193682.0	
11	2025-05-14	04:00:00	211.450	211.930000	208.8500	210.25	38492128.0	
12	2025-05-15	04:00:00	206.450	206.880000	202.6730	205.17	64347317.0	
13	2025-05-16	04:00:00	206.850	206.850000	204.3740	205.59	43318478.0	
14	2025-05-19	04:00:00	201.645	206.620000	201.2600	206.16	34314810.0	
15	2025-05-20	04:00:00	204.628	205.589900	202.6500	204.07	29470373.0	
16	2025-05-21	04:00:00	201.610	203.455000	200.0600	201.12	42460924.0	
17	2025-05-22	04:00:00	201.380	205.760000	200.1600	203.10	38938882.0	
18	2025-05-23	04:00:00	198.900	202.370000	197.8500	200.99	33393545.0	
19	2025-05-27	04:00:00	203.085	206.690000	202.1900	206.02	34892044.0	
20	2025-05-28	04:00:00	205.915	207.660000	204.4100	204.72	28549753.0	
21	2025-05-29	04:00:00	208.025	208.810000	204.2300	205.70	34700005.0	
22	2025-05-30	04:00:00	204.840	205.990000	201.6950	205.01	51679406.0	
23	2025-06-02	04:00:00	204.980	207.000000	202.6800	206.65	29113319.0	
24	2025-06-03	04:00:00	207.105	208.946900	205.0300	205.71	33139121.0	
25	2025-06-04	04:00:00	206.550	208.180000	205.1800	207.23	29915592.0	
26	2025-06-05	04:00:00	209.550	212.810000	207.5600	207.91	51979243.0	
27	2025-06-06	04:00:00	212.400	213.869900	210.5000	213.57	39832500.0	
28	2025-06-09	04:00:00	214.750	217.850000	212.8800	216.98	38102502.0	
29	2025-06-10	04:00:00	216.780	217.690000	214.1500	217.61	31303317.0	
30	2025-06-11	04:00:00	217.410	218.400000	212.8900	213.20	39325981.0	
31	2025-06-12	04:00:00	211.780	213.580000	211.3300	213.24	27639991.0	
32	2025-06-13	04:00:00	209.960	214.050000	209.6200	212.10	29337763.0	
33	2025-06-16	04:00:00	212.310	217.060000	211.6000	216.10	33284158.0	
34	2025-06-17	04:00:00	215.195	217.410000	214.5600	214.82	32086262.0	
35	2025-06-18	04:00:00	215.090	217.960000	212.3400	212.52	44360509.0	
36	2025-06-20	04:00:00	214.680	214.890000	208.2709	209.69	75350733.0	
37	2025-06-23	04:00:00	209.790	210.390000	207.3101	208.47	37311725.0	
38	2025-06-24	04:00:00	212.135	214.340000	211.0450	212.77	38378757.0	
39	2025-06-25	04:00:00	214.615	216.030000	211.1100	211.99	31755698.0	
40	2025-06-26	04:00:00	213.120	218.035000	212.0100	217.12	50480814.0	

```
otc
        vwap
              transactions
0
    186.2911
                     507603
                             None
1
    182.7658
                     688982
                             None
2
    188.9767
                     890648
                             None
3
    189.9300
                     920469
                             None
4
    186.9373
                     458698
                             None
5
    185.6619
                     371859
                             None
6
    188.4964
                     499932
                             None
7
                     513351
    192.1266
                             None
8
    192.7564
                     362745
                             None
9
                     920091
    208.1558
                             None
10
    212.6792
                     743293
                             None
11
    210.4614
                     519690
                             None
12
    204.7892
                     821281
                             None
13
    205.3336
                     490987
                             None
14
    205.3692
                     425652
                             None
15
    204.0108
                     417640
                             None
16
    201.5235
                     569211
                             None
17
    203.3273
                     514617
                             None
18
    200.7891
                     483196
                             None
19
    205.2156
                     505171
                             None
20
                     407710
    205.6978
                             None
21
    206.2943
                     496232
                             None
22
    204.5318
                     493714
                             None
23
                     438892
    205.5940
                             None
24
    206.6343
                     436643
                             None
25
    206.8920
                     406881
                             None
26
    209.7551
                     668806
                             None
27
    212.5672
                     512176
                             None
28
    216.0254
                     560148
                             None
29
    216.5561
                     429031
                             None
  214.8840
                     503640
30
                             None
31
    212.8655
                     364940
                             None
32
    211.9129
                     443361
                             None
33 215.1622
                     457829
                             None
    215.7332
                     431316
                             None
34
    214.6135
35
                     475101
                             None
36
    210.6230
                     591675
                             None
37
    208.9130
                     513937
                             None
38
    213.1129
                     459901
                             None
39
    212.8066
                     417565
                             None
40
    216.0944
                     572822
                             None
    221.7267
                     750603
                             None
Combined data:
                                                          close
                    Date
                                       high
                                                   low
                                                                      volume
                              open
0
    2025-01-02 05:00:00
                          222.030
                                    225.150 218.1900
                                                        220.22
                                                                  33956579.0
```

```
2025-01-03 05:00:00 222.505 225.360 221.6200 224.19
                                                          27515606.0
   2025-01-06 05:00:00 226.780 228.835 224.8400 227.61
2
                                                          31849831.0
   2025-01-07 05:00:00 227.900 228.381 221.4600 222.11
3
                                                          28084164.0
   2025-01-08 05:00:00 223.185 223.520 220.2000 222.13
                                                          25033292.0
                                            •••
116 2025-06-23 04:00:00 209.790 210.390 207.3101 208.47
                                                          37311725.0
117 2025-06-24 04:00:00 212.135 214.340 211.0450 212.77
                                                          38378757.0
118 2025-06-25 04:00:00 214.615 216.030 211.1100 211.99
                                                          31755698.0
119 2025-06-26 04:00:00 213.120 218.035 212.0100 217.12
                                                          50480814.0
120 2025-06-27 04:00:00 219.920 223.300 216.7400 223.30 119217138.0
        vwap transactions
                            otc
0
    221.2745
                   449631 None
1
    223.7050
                   346976 None
2
    227.0921
                   410686 None
3
    223.4033
                   379570 None
4
    222.0414
                   325539 None
116 208.9130
                   513937 None
117 213.1129
                   459901 None
118 212.8066
                   417565 None
119 216.0944
                   572822 None
120 221.7267
                   750603 None
```

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2025-06-27 00:00:00 thru 2025-08-26 00:00:00 for AMZN...

		Date	open	high	low	close	volume	\
0	2025-06-27	04:00:00	219.920	223.3000	216.7400	223.30	119217138.0	
1	2025-06-30	04:00:00	223.520	223.8200	219.1200	219.39	58887780.0	
2	2025-07-01	04:00:00	219.500	221.8750	217.9300	220.46	39256830.0	
3	2025-07-02	04:00:00	219.730	221.6000	219.0600	219.92	30894178.0	
4	2025-07-03	04:00:00	221.820	224.0100	221.3600	223.41	29632353.0	
5	2025-07-07	04:00:00	223.000	224.2900	222.3700	223.47	36604139.0	
6	2025-07-08	04:00:00	223.915	224.0000	218.4300	219.36	45691987.0	
7	2025-07-09	04:00:00	221.070	224.2900	220.4700	222.54	38155121.0	
8	2025-07-10	04:00:00	221.550	222.7900	219.7000	222.26	30370591.0	
9	2025-07-11	04:00:00	223.580	226.6799	222.3700	225.02	50518307.0	
10	2025-07-14	04:00:00	225.070	226.6600	224.2400	225.69	35702597.0	
11	2025-07-15	04:00:00	226.200	227.2700	225.4550	226.35	34907294.0	
12	2025-07-16	04:00:00	225.875	226.1000	222.1800	223.19	39535926.0	
13	2025-07-17	04:00:00	223.320	224.5000	222.5100	223.88	31855831.0	
14	2025-07-18	04:00:00	225.140	226.4000	222.9800	226.13	37833807.0	
15	2025-07-21	04:00:00	225.835	229.6900	225.6500	229.30	40297556.0	

```
16 2025-07-22 04:00:00 229.680
                                230.0000
                                          226.3500 227.47
                                                             37483702.0
17 2025-07-23 04:00:00 228.470
                                228.7900 227.0900
                                                    228.29
                                                             28294852.0
18 2025-07-24 04:00:00 229.170
                                236.0000
                                          228.6400
                                                    232.23
                                                             42902266.0
19 2025-07-25 04:00:00
                       232.220
                                232.4800
                                          231.1800
                                                    231.44
                                                             28712095.0
20 2025-07-28 04:00:00
                       233.350
                                234.2900
                                          232.2500
                                                    232.79
                                                             26300138.0
21 2025-07-29 04:00:00
                       234.150
                                234.7200
                                          230.3100
                                                    231.01
                                                             33716220.0
22 2025-07-30 04:00:00
                       231.640
                                231.8000
                                          229.2900
                                                    230.19
                                                             32993273.0
23 2025-07-31 04:00:00
                       235.770
                                236.5300
                                          231.4000
                                                    234.11
                                                            104357263.0
24 2025-08-01 04:00:00 217.210
                                220.4399
                                          212.8000
                                                    214.75
                                                            122258801.0
25 2025-08-04 04:00:00 217.400
                                217.4400
                                          211.4200
                                                   211.65
                                                            77890146.0
26 2025-08-05 04:00:00 213.050
                                216.3000
                                          212.8700
                                                    213.75
                                                             51505121.0
27 2025-08-06 04:00:00 214.695
                                222.6500
                                          213.7409
                                                    222.31
                                                             54823045.0
28 2025-08-07 04:00:00
                       221.000
                                226.2200
                                                    223.13
                                          220.8200
                                                             40603513.0
29 2025-08-08 04:00:00 223.140
                                223.8000
                                          221.8836
                                                    222.69
                                                             32970477.0
30 2025-08-11 04:00:00
                       221.780
                                223.0500
                                          220.4000
                                                    221.30
                                                             31646222.0
31 2025-08-12 04:00:00 222.230
                                                    221.47
                                223.5000
                                          219.0500
                                                             37254707.0
32 2025-08-13 04:00:00 222.000
                                224.9185
                                          222.0000
                                                    224.56
                                                             36508335.0
33 2025-08-14 04:00:00 227.400
                                                    230.98
                                233.1100
                                          227.0200
                                                             61545824.0
34 2025-08-15 04:00:00
                       232.580
                                234.0800
                                          229.8070
                                                    231.03
                                                             39649244.0
35 2025-08-18 04:00:00 230.225
                                231.9100
                                          228.3300
                                                    231.49
                                                             25248890.0
36 2025-08-19 04:00:00 230.090
                                230.5283 227.1200
                                                    228.01
                                                             29891012.0
37 2025-08-20 04:00:00 227.120
                                227.2700 220.9150 223.81
                                                             36604319.0
```

	vwap	transactions	otc
0	221.7267	750603	None
1	220.6316	673189	None
2	220.1508	544150	None
3	220.2103	429633	None
4	222.8867	364422	None
5	223.4121	513469	None
6	220.4836	615447	None
7	222.4555	493756	None
8	221.7055	451223	None
9	224.8908	661385	None
10	225.6173	460428	None
11	226.4985	507705	None
12	223.7872	556155	None
13	223.6948	445580	None
14	225.2906	454003	None
15	228.3292	530328	None
16	227.8662	475209	None
17	228.1765	344504	None
18	231.8022	526287	None
19	231.7831	365765	None
20	233.0997	394809	None
21	231.4830	446598	None
22	230.9240	445462	None
23	232.4106	1254660	None

```
24 216.2973
                   1742475
                            None
25 213.1312
                   1046525
                            None
26 214.5142
                    639055
                            None
27 219.4299
                    654274
                            None
28 223.1357
                    553279
                            None
29 222.6698
                    397504
                            None
30 221.3865
                    441975
                            None
31 221.4124
                    472607
                            None
32 223.9846
                    488194 None
33 230.5020
                    738785
                            None
                            None
34 231.3857
                    495351
35 230.5791
                    371228
                           None
36 228.3423
                    405021
                            None
37 223.6745
                    493752
                            None
Combined data:
                                                       close
                                                                  volume
                   Date
                                      high
                                                 low
                            open
0
    2025-01-02 05:00:00
                         222.030 225.1500
                                            218.190
                                                      220.22
                                                              33956579.0
                                            221.620
1
    2025-01-03 05:00:00
                         222.505
                                  225.3600
                                                      224.19
                                                              27515606.0
2
   2025-01-06 05:00:00
                         226.780
                                  228.8350
                                            224.840
                                                      227.61
                                                              31849831.0
3
    2025-01-07 05:00:00
                         227.900
                                  228.3810
                                            221.460
                                                      222.11
                                                              28084164.0
    2025-01-08 05:00:00
                         223.185
                                  223.5200
                                            220.200
                                                      222.13
                                                              25033292.0
. .
                           •••
                                   •••
                                                •••
153 2025-08-14 04:00:00
                         227.400
                                  233.1100
                                            227.020
                                                      230.98
                                                              61545824.0
154 2025-08-15 04:00:00
                         232.580
                                            229.807
                                                      231.03
                                  234.0800
                                                              39649244.0
155 2025-08-18 04:00:00
                         230.225
                                  231.9100
                                            228.330
                                                      231.49
                                                              25248890.0
156 2025-08-19 04:00:00
                         230.090
                                  230.5283
                                            227.120
                                                      228.01
                                                              29891012.0
157 2025-08-20 04:00:00
                         227.120
                                  227.2700 220.915
                                                     223.81
                                                              36604319.0
               transactions
                              otc
         vwap
0
     221.2745
                     449631
                             None
1
     223.7050
                     346976
                             None
2
     227.0921
                     410686
                             None
3
     223.4033
                     379570
                             None
4
     222.0414
                     325539
                             None
. .
153
    230.5020
                     738785
                             None
154
    231.3857
                     495351
                             None
155
    230.5791
                     371228
                             None
    228.3423
                     405021 None
156
    223.6745
                     493752 None
157
```

Sleeping for 12 seconds to avoid hitting API rate limits...

[6]: # Copy this <!-- INSERT_polygon_fetch_full_history_HERE --> to index_temp.md

Exported and tracked: polygon_fetch_full_history.md

1.5.2 Polygon Pull Data

```
[7]: current_year = datetime.now().year
     current month = datetime.now().month
     current_day = datetime.now().day
     # Example usage - daily
     df = polygon_pull_data(
         base_directory=DATA_DIR,
         ticker="AMZN",
         source="Polygon",
         asset_class="Equities",
         start_date=datetime(current_year - 2, current_month, current_day),
         timespan="day",
         multiplier=1,
         adjusted=True,
         force_existing_check=True,
         free_tier=True,
         verbose=True,
         excel_export=True,
         pickle export=True,
         output_confirmation=True,
     )
```

File found...updating the AMZN day data.

Existing data:

```
Date
                          open
                                    high
                                              low
                                                    close
                                                              volume \
0
   2023-07-28 04:00:00 129.690 133.0100 129.3300 132.21 46269781.0
   2023-07-31 04:00:00 133.200 133.8700 132.3800 133.68
1
                                                          41901516.0
   2023-08-01 04:00:00 133.550 133.6900 131.6199 131.69
                                                          42250989.0
3
   2023-08-02 04:00:00 130.154 130.2300 126.8200 128.21 50988614.0
4
   2023-08-03 04:00:00 127.480 129.8400 126.4100 128.91
                                                          90855736.0
513 2025-08-14 04:00:00 227.400 233.1100 227.0200 230.98 61545824.0
514 2025-08-15 04:00:00 232.580 234.0800 229.8070 231.03 39649244.0
515 2025-08-18 04:00:00 230.225 231.9100 228.3300 231.49
                                                          25248890.0
                       230.090 230.5283 227.1200 228.01
516 2025-08-19 04:00:00
                                                          29891012.0
517 2025-08-20 04:00:00 227.120 227.2700 220.9150 223.81 36604319.0
        vwap transactions
                            otc
0
    131.8837
                   413438 None
1
    133.3410
                   406644 None
2
    132.2470
                    385743 None
```

3	128.3973	532942	None
4	131.4941	746639	None
	•••		
513	230.5020	738785	None
514	231.3857	495351	None
515	230.5791	371228	None
516	228.3423	405021	None
517	223.6745	493752	None

Last date in existing data: 2025-08-20 04:00:00

Number of rows in existing data: 518

Forcing check of existing data...

Pulling day data for 2023-08-21 00:00:00 thru 2023-10-20 00:00:00 for AMZN...

		Date	open	high	low	close	volume	\
0	2023-08-22	04:00:00	135.080	135.6500	133.7300	134.25	32935104.0	
1	2023-08-23	04:00:00	134.500	135.9500	133.2200	135.52	42801043.0	
2	2023-08-24	04:00:00	136.400	136.7750	131.8300	131.84	43646250.0	
3	2023-08-25	04:00:00	132.470	133.8700	130.5800	133.26	44147451.0	
4	2023-08-28	04:00:00	133.780	133.9500	131.8500	133.14	34108410.0	
5	2023-08-29	04:00:00	133.380	135.1400	133.2500	134.91	38646093.0	
6	2023-08-30	04:00:00	134.930	135.6800	133.9200	135.07	36137015.0	
7	2023-08-31	04:00:00	135.060	138.7885	135.0000	138.01	58781314.0	
8	2023-09-01	04:00:00	139.455	139.9600	136.8750	138.12	40991536.0	
9	2023-09-05	04:00:00	137.730	137.8000	135.8200	137.27	40636738.0	
10	2023-09-06	04:00:00	136.320	137.4500	134.6100	135.36	41785507.0	
11	2023-09-07	04:00:00	133.900	138.0300	133.1600	137.85	48498912.0	
12	2023-09-08	04:00:00	136.860	138.8519	136.7500	138.23	38365929.0	
13	2023-09-11	04:00:00	138.750	143.6200	138.6400	143.10	56764525.0	
14	2023-09-12	04:00:00	142.320	143.0000	140.6100	141.23	42668452.0	
15	2023-09-13	04:00:00	140.950	144.9800	140.8650	144.85	60465175.0	
16	2023-09-14	04:00:00	145.080	145.8600	142.9500	144.72	64033607.0	
17	2023-09-15	04:00:00	142.690	143.5700	140.0900	140.39	102909327.0	
18	2023-09-18	04:00:00	140.480	141.7500	139.2200	139.98	42823480.0	
19	2023-09-19	04:00:00	138.700	138.8400	135.5600	137.63	61482470.0	
20	2023-09-20	04:00:00	138.550	139.3700	135.2000	135.29	46263716.0	
21	2023-09-21	04:00:00	131.940	132.2400	129.3100	129.33	70343342.0	
22	2023-09-22	04:00:00	131.110	132.0300	128.5200	129.12	59904348.0	
23	2023-09-25	04:00:00	129.360	131.7800	128.7700	131.27	46017825.0	
24	2023-09-26	04:00:00	130.120	130.3900	125.2800	125.98	73048207.0	
25	2023-09-27	04:00:00	125.760	127.4800	124.1300	125.98	66553449.0	
26	2023-09-28	04:00:00	124.040	126.5801	123.0400	125.98	54554968.0	
27	2023-09-29	04:00:00	128.200	129.1500	126.3200	127.12	62411730.0	
28	2023-10-02	04:00:00	127.280	130.4700	126.5400	129.46	48029744.0	
29	2023-10-03		128.060	128.5200	124.2544	124.72	51564991.0	
30	2023-10-04	04:00:00	126.060	127.3600	125.6800	127.00	44203870.0	

```
31 2023-10-05 04:00:00 126.710
                                126.7300 124.3300
                                                    125.96
                                                              39660643.0
32 2023-10-06 04:00:00 124.160
                                                    127.96
                                128.4500
                                          124.1300
                                                              46836698.0
33 2023-10-09 04:00:00 126.220
                                 128.7900
                                          124.7600
                                                    128.26
                                                              38773738.0
34 2023-10-10 04:00:00
                       128.820
                                 130.7400
                                                    129.48
                                           128.0500
                                                              42178619.0
35 2023-10-11 04:00:00 129.740
                                 132.0500
                                           129.6100
                                                    131.83
                                                              40741842.0
36 2023-10-12 04:00:00
                       132.170
                                 134.4800
                                           131.2300
                                                    132.33
                                                              55528581.0
37 2023-10-13 04:00:00
                       132.980
                                 133.3145
                                           128.9500
                                                    129.79
                                                              45824685.0
38 2023-10-16 04:00:00
                       130.690
                                133.0700
                                           130.4250
                                                    132.55
                                                              42832918.0
39 2023-10-17 04:00:00
                       130.390
                                132.5800
                                                    131.47
                                           128.7100
                                                              49344550.0
40 2023-10-18 04:00:00
                       129.900
                                130.6699
                                          127.5100
                                                    128.13
                                                              42699479.0
41 2023-10-19 04:00:00 130.565
                                132.2400
                                          127.4700
                                                    128.40
                                                              60961355.0
42 2023-10-20 04:00:00 128.050 128.1700 124.9700 125.17
                                                              56406410.0
```

	vwap	transactions	otc
0	134.5803	328047	None
1	134.9818	382203	None
2	133.1621	406488	None
3	132.5207	405801	None
4	132.7142	333030	None
5	134.4652	361304	None
6	134.9916	325590	None
7	137.7966	466039	None
8	137.9769	398730	None
9	136.8707	363848	None
10	135.6483	399464	None
11	136.5671	426888	None
12	138.0726	351930	None
13	141.8304	546830	None
14	141.6569	395583	None
15	143.8922	520766	None
16	144.8135	511529	None
17	141.0102	563980	None
18	140.0755	346514	None
19	136.9778	488183	None
20	136.9168	402932	None
21	130.5430	643638	None
22	130.1568	486108	None
23	130.8524	412022	None
24	126.9468	619791	None
25	125.4248	553871	None
26	125.0832	493974	None
27	127.5752	439844	None
28	128.9332	436813	None
29	125.4744	479691	None
30	126.5844	407400	None
31	125.6178	356274	None
32	126.7206	410287	None
33	126.9932	347740	None

```
34 129.6571
                   369849
                           None
35 130.7803
                   364559 None
36 132.8411
                   475931
                          None
37 130.6094
                   387721
                          None
38 132.1167
                   395337 None
39 131.0178
                   400903 None
40 128.9440
                   404633 None
41 129.8377
                   538133
                          None
42 125.9402
                   489134 None
Combined data:
                                                     close
                  Date
                           open
                                     high
                                               low
                                                                volume \
   2023-07-28 04:00:00
                       129.690 133.0100 129.3300 132.21
0
                                                            46269781.0
1
   2023-07-31 04:00:00
                       133.200 133.8700
                                          132.3800 133.68
                                                            41901516.0
2
   2023-08-01 04:00:00
                       133.550 133.6900
                                          131.6199
                                                   131.69
                                                            42250989.0
3
   2023-08-02 04:00:00
                        130.154
                                130.2300
                                          126.8200
                                                   128.21
                                                            50988614.0
   2023-08-03 04:00:00
                       127.480 129.8400
                                                    128.91
                                          126.4100
                                                            90855736.0
513 2025-08-14 04:00:00
                        227.400
                                233.1100 227.0200
                                                    230.98
                                                            61545824.0
514 2025-08-15 04:00:00 232.580 234.0800
                                          229.8070 231.03
                                                            39649244.0
515 2025-08-18 04:00:00
                        230.225
                                231.9100
                                          228.3300 231.49
                                                            25248890.0
516 2025-08-19 04:00:00
                        230.090 230.5283
                                          227.1200
                                                   228.01
                                                            29891012.0
517 2025-08-20 04:00:00 227.120
                                227.2700 220.9150 223.81
                                                            36604319.0
        vwap transactions
                             otc
0
                    413438 None
    131.8837
1
                    406644 None
    133.3410
2
    132.2470
                    385743 None
3
    128.3973
                    532942 None
4
    131.4941
                    746639 None
. .
   230.5020
                    738785
513
                           None
514
    231.3857
                    495351
                           None
515
    230.5791
                    371228 None
    228.3423
                    405021 None
516
517
    223.6745
                    493752 None
```

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2023-10-19 00:00:00 thru 2023-12-18 00:00:00 for AMZN...

	Dat	e open	high	low	close	volume	\
0	2023-10-19 04:00:0	0 130.565	132.2400	127.4700	128.40	60961355.0	
1	2023-10-20 04:00:0	0 128.050	128.1700	124.9700	125.17	56406410.0	
2	2023-10-23 04:00:0	0 124.630	127.8800	123.9800	126.56	48259953.0	
3	2023-10-24 04:00:0	0 127.740	128.8000	126.3400	128.56	46477355.0	

```
2023-10-25 04:00:00
                         126.040
                                   126.3400
                                                        121.39
                                              120.7900
                                                                  74577544.0
                                                                 100419516.0
5
   2023-10-26 04:00:00
                         120.630
                                   121.6393
                                              118.3500
                                                        119.57
   2023-10-27 04:00:00
                         126.200
                                   130.0200
                                                        127.74
6
                                              125.5200
                                                                 125309313.0
7
   2023-10-30 04:00:00
                         129.720
                                                        132.71
                                   133.0000
                                              128.5600
                                                                  72485542.0
8
   2023-10-31 04:00:00
                         132.750
                                   133.5700
                                              131.7100
                                                        133.09
                                                                  51589380.0
   2023-11-01 04:00:00
                         133.960
                                   137.3500
                                              133.7100
                                                        137.00
                                                                  61529409.0
10 2023-11-02 04:00:00
                         138.730
                                   138.8100
                                              136.4700
                                                        138.07
                                                                  52236693.0
11 2023-11-03 04:00:00
                         138.990
                                   139.4900
                                              137.4500
                                                        138.60
                                                                  44059805.0
12 2023-11-06 05:00:00
                         138.760
                                   140.7300
                                              138.3600
                                                        139.74
                                                                  44970417.0
13 2023-11-07 05:00:00
                         140.550
                                   143.3700
                                              140.5000
                                                        142.71
                                                                  53553537.0
14 2023-11-08 05:00:00
                         142.970
                                   143.1200
                                              141.2183
                                                        142.08
                                                                  44521658.0
15 2023-11-09 05:00:00
                         142.020
                                   142.6500
                                              139.8400
                                                        140.60
                                                                  36235367.0
16 2023-11-10 05:00:00
                         140.460
                                   143.6500
                                                        143.56
                                              139.9100
                                                                  49349937.0
17 2023-11-13 05:00:00
                         142.080
                                   143.2300
                                              140.6700
                                                        142.59
                                                                  35680570.0
18 2023-11-14 05:00:00
                         145.000
                                   147.2600
                                              144.6800
                                                        145.80
                                                                  56674551.0
19 2023-11-15 05:00:00
                         147.060
                                   147.2900
                                                        143.20
                                              142.5900
                                                                  63875720.0
20 2023-11-16 05:00:00
                         140.910
                                   143.3200
                                              139.5200
                                                        142.83
                                                                  49653512.0
21 2023-11-17 05:00:00
                         142.660
                                                        145.18
                                   145.2300
                                              142.5450
                                                                  49678437.0
22 2023-11-20 05:00:00
                         145.130
                                   146.6300
                                                        146.13
                                              144.7250
                                                                  41978766.0
23 2023-11-21 05:00:00
                         143.910
                                   144.0500
                                              141.5000
                                                        143.90
                                                                  71225992.0
24 2023-11-22 05:00:00
                         144.570
                                   147.7400
                                              144.5700
                                                        146.71
                                                                  45700002.0
25 2023-11-24 05:00:00
                         146.700
                                   147.2000
                                              145.3200
                                                        146.74
                                                                  22378379.0
26 2023-11-27 05:00:00
                         147.530
                                   149.2600
                                              146.8800
                                                        147.73
                                                                  53762428.0
27 2023-11-28 05:00:00
                         146.980
                                   147.5999
                                              145.5300
                                                        147.03
                                                                  42711682.0
28 2023-11-29 05:00:00
                         147.850
                                   148.5400
                                              145.9700
                                                        146.32
                                                                  40610907.0
29 2023-11-30 05:00:00
                         144.760
                                   146.9300
                                              144.3320
                                                        146.09
                                                                  65814022.0
30 2023-12-01 05:00:00
                         146.000
                                   147.2450
                                              145.5500
                                                        147.03
                                                                  39951833.0
31 2023-12-04 05:00:00
                         145.250
                                   145.3500
                                              142.8100
                                                        144.84
                                                                  48294244.0
32 2023-12-05 05:00:00
                         143.550
                                   148.5700
                                              143.1300
                                                        146.88
                                                                  46822411.0
33 2023-12-06 05:00:00
                         147.580
                                   147.8500
                                              144.2800
                                                        144.52
                                                                  39678960.0
                                                        146.88
34 2023-12-07 05:00:00
                         146.150
                                   147.9200
                                              145.3400
                                                                  52352830.0
35 2023-12-08 05:00:00
                         145.480
                                   147.8400
                                              145.4000
                                                        147.42
                                                                  41905965.0
36 2023-12-11 05:00:00
                         145.660
                                   146.1900
                                              143.6400
                                                        145.89
                                                                  50907288.0
37 2023-12-12 05:00:00
                         145.520
                                   147.5000
                                                        147.48
                                              145.3000
                                                                  44944264.0
38 2023-12-13 05:00:00
                         148.120
                                   149.4600
                                              146.8200
                                                        148.84
                                                                  52766196.0
39 2023-12-14 05:00:00
                         149.930
                                   150.5400
                                              145.5200
                                                        147.42
                                                                  58400848.0
40 2023-12-15 05:00:00
                         148.380
                                   150.5700
                                              147.8800
                                                        149.97
                                                                 110089342.0
41 2023-12-18 05:00:00
                         150.560
                                   154.8550
                                              150.0500
                                                        154.07
                                                                  62512828.0
        vwap
              transactions
                               otc
0
    129.8377
                     538133
                             None
1
    125.9402
                     489134
                             None
2
    126.3033
                     423355
                              None
3
    127.8893
                     399787
                             None
4
    122.7390
                     738252
                             None
5
    120.5766
                     866563
                             None
6
    128.1285
                    1056045
                             None
7
    131.7162
                     616257
                             None
```

```
432954
8
    132.7607
                              None
9
    135.7789
                     552684
                              None
    137.6996
                      464074
10
                              None
11
    138.5921
                      406045
                              None
    139.6953
12
                      392505
                              None
13
    142.5043
                      469255
                              None
14
    142.0397
                      375299
                              None
15
    141.2394
                      338545
                              None
16
    142.3780
                      410268
                              None
17
    142.3769
                      339006
                              None
    146.1430
18
                      508013
                              None
19
    143.9570
                      550008
                              None
20
    142.0802
                      444059
                              None
21
    144.3582
                      381169
                              None
22
    145.9368
                      380926
                              None
23
    143.0430
                      566880
                              None
24
    146.7929
                      428449
                              None
25
    146.3718
                      217521
                              None
26
    148.2873
                      465572
                              None
27
    146.8346
                      383221
                              None
28
    146.8633
                      358306
                              None
29
    145.7585
                      460829
                              None
30
    146.6909
                      361363
                              None
                      462624
31
    144.4521
                              None
32
    146.6481
                      446158
                              None
33
    145.5034
                      365815
                              None
                      382097
34
    146.7179
                              None
35
    146.9405
                      343829
                              None
36
    145.3001
                      435150
                              None
37
    146.7466
                      338593
                              None
                      438472
38
    148.2608
                              None
39
    147.8687
                      532121
                              None
40
    149.5349
                      492773
                              None
41
    153.4071
                      511128
                              None
Combined data:
                    Date
                              open
                                         high
                                                     low
                                                            close
                                                                        volume
0
    2023-07-28 04:00:00
                           129.690
                                     133.0100
                                                129.3300
                                                           132.21
                                                                    46269781.0
1
    2023-07-31 04:00:00
                           133.200
                                     133.8700
                                                132.3800
                                                           133.68
                                                                    41901516.0
    2023-08-01 04:00:00
2
                           133.550
                                     133.6900
                                                131.6199
                                                           131.69
                                                                    42250989.0
3
    2023-08-02 04:00:00
                           130.154
                                     130.2300
                                                126.8200
                                                           128.21
                                                                    50988614.0
4
    2023-08-03 04:00:00
                           127.480
                                                126.4100
                                                           128.91
                                     129.8400
                                                                    90855736.0
513 2025-08-14 04:00:00
                           227.400
                                     233.1100
                                                227.0200
                                                           230.98
                                                                    61545824.0
514 2025-08-15 04:00:00
                           232.580
                                     234.0800
                                                229.8070
                                                           231.03
                                                                    39649244.0
515 2025-08-18 04:00:00
                           230.225
                                     231.9100
                                                228.3300
                                                           231.49
                                                                    25248890.0
516 2025-08-19 04:00:00
                           230.090
                                     230.5283
                                                227.1200
                                                           228.01
                                                                    29891012.0
517 2025-08-20 04:00:00
                           227.120
                                     227.2700
                                                220.9150
                                                           223.81
                                                                    36604319.0
```

	vwap	transactions	otc
0	131.8837	413438	None
1	133.3410	406644	None
2	132.2470	385743	None
3	128.3973	532942	None
4	131.4941	746639	None
	•••	•••	
513	230.5020	738785	None
514	231.3857	495351	None
515	230.5791	371228	None
516	228.3423	405021	None
517	223.6745	493752	None

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2023-12-17 00:00:00 thru 2024-02-15 00:00:00 for AMZN...

	Date	open	high	low	close	volume	\
2023-12-18	05:00:00	150.56	154.855	150.0500	154.07	62512828.0	
2023-12-19	05:00:00	154.40	155.120	152.6900	153.79	43171292.0	
2023-12-20	05:00:00	152.90	155.630	151.5600	152.12	50322106.0	
2023-12-21	05:00:00	153.30	153.970	152.1000	153.84	36305733.0	
2023-12-22	05:00:00	153.77	154.350	152.7100	153.42	29514093.0	
2023-12-26	05:00:00	153.56	153.975	153.0300	153.41	25067222.0	
2023-12-27	05:00:00	153.56	154.780	153.1200	153.34	31434733.0	
2023-12-28	05:00:00	153.72	154.080	152.9500	153.38	27057002.0	
2023-12-29	05:00:00	153.10	153.890	151.0300	151.94	39823204.0	
2024-01-02	05:00:00	151.54	152.380	148.3900	149.93	47339424.0	
2024-01-03	05:00:00	149.20	151.050	148.3300	148.47	49425495.0	
2024-01-04	05:00:00	145.59	147.380	144.0500	144.57	56039807.0	
2024-01-05	05:00:00	144.69	146.590	144.5300	145.24	45153147.0	
2024-01-08	05:00:00	146.74	149.400	146.1500	149.10	46757053.0	
2024-01-09	05:00:00	148.33	151.710	148.2100	151.37	43812567.0	
2024-01-10	05:00:00	152.06	154.420	151.8810	153.73	44421830.0	
2024-01-11	05:00:00	155.04	157.170	153.1200	155.18	49072691.0	
2024-01-12	05:00:00	155.39	156.200	154.0100	154.62	40484155.0	
2024-01-16	05:00:00	153.53	154.990	152.1500	153.16	41384636.0	
2024-01-17	05:00:00	151.49	152.150	149.9100	151.71	34953363.0	
2024-01-18	05:00:00	152.77	153.775	151.8200	153.50	37850245.0	
2024-01-19	05:00:00	153.83	155.760	152.7400	155.34	51651628.0	
2024-01-22	05:00:00	156.89	157.050	153.9000	154.78	43687468.0	
2024-01-23	05:00:00	154.85	156.210	153.9300	156.02	37986039.0	
2024-01-24	05:00:00	157.80	158.510	156.4800	156.87	48547315.0	
2024-01-25	05:00:00	156.95	158.505	154.5501	157.75	43638592.0	
2024-01-26	05:00:00	158.42	160.720	157.9100	159.12	51047353.0	
	2023-12-19 2023-12-20 2023-12-21 2023-12-26 2023-12-27 2023-12-28 2023-12-29 2024-01-02 2024-01-04 2024-01-05 2024-01-08 2024-01-09 2024-01-10 2024-01-11 2024-01-12 2024-01-15 2024-01-15 2024-01-16 2024-01-17 2024-01-18 2024-01-19 2024-01-22 2024-01-23 2024-01-24 2024-01-25	2023-12-18 05:00:00 2023-12-19 05:00:00 2023-12-20 05:00:00 2023-12-21 05:00:00 2023-12-22 05:00:00 2023-12-26 05:00:00 2023-12-27 05:00:00 2023-12-28 05:00:00 2023-12-29 05:00:00 2024-01-02 05:00:00 2024-01-03 05:00:00	2023-12-18 05:00:00 150.56 2023-12-19 05:00:00 154.40 2023-12-20 05:00:00 152.90 2023-12-21 05:00:00 153.30 2023-12-22 05:00:00 153.77 2023-12-26 05:00:00 153.56 2023-12-27 05:00:00 153.72 2023-12-28 05:00:00 153.72 2023-12-29 05:00:00 153.10 2024-01-02 05:00:00 153.10 2024-01-03 05:00:00 149.20 2024-01-03 05:00:00 145.59 2024-01-04 05:00:00 146.74 2024-01-05 05:00:00 148.33 2024-01-09 05:00:00 148.33 2024-01-10 05:00:00 155.04 2024-01-11 05:00:00 155.39 2024-01-12 05:00:00 153.53 2024-01-16 05:00:00 153.53 2024-01-17 05:00:00 153.83 2024-01-18 05:00:00 153.83 2024-01-22 05:00:00 156.89 2024-01-24 <td>2023-12-18 05:00:00 150.56 154.855 2023-12-19 05:00:00 154.40 155.120 2023-12-20 05:00:00 152.90 155.630 2023-12-21 05:00:00 153.30 153.970 2023-12-22 05:00:00 153.77 154.350 2023-12-26 05:00:00 153.56 153.975 2023-12-27 05:00:00 153.56 154.780 2023-12-28 05:00:00 153.72 154.080 2023-12-29 05:00:00 153.10 153.890 2024-01-02 05:00:00 153.10 153.890 2024-01-03 05:00:00 151.54 152.380 2024-01-03 05:00:00 149.20 151.050 2024-01-04 05:00:00 145.59 147.380 2024-01-05 05:00:00 144.69 146.590 2024-01-08 05:00:00 148.33 151.710 2024-01-10 05:00:00 152.06 154.420 2024-01-11 05:00:00 155.04 157.170 2024-01-12 05:00:00 153.53 154.9</td> <td>2023-12-18 05:00:00 150.56 154.855 150.0500 2023-12-19 05:00:00 154.40 155.120 152.6900 2023-12-20 05:00:00 152.90 155.630 151.5600 2023-12-21 05:00:00 153.30 153.970 152.1000 2023-12-22 05:00:00 153.77 154.350 152.7100 2023-12-26 05:00:00 153.56 153.975 153.0300 2023-12-27 05:00:00 153.56 154.780 153.1200 2023-12-28 05:00:00 153.72 154.080 152.9500 2023-12-29 05:00:00 153.10 153.890 151.0300 2024-01-02 05:00:00 151.54 152.380 148.3900 2024-01-03 05:00:00 149.20 151.050 148.3300 2024-01-04 05:00:00 145.59 147.380 144.5300 2024-01-05 05:00:00 144.69 146.590 144.5300 2024-01-08 05:00:00 148.33 151.710</td> <td>2023-12-18 05:00:00 150.56 154.855 150.0500 154.07 2023-12-19 05:00:00 154.40 155.120 152.6900 153.79 2023-12-20 05:00:00 152.90 155.630 151.5600 152.12 2023-12-21 05:00:00 153.30 153.970 152.1000 153.84 2023-12-26 05:00:00 153.77 154.350 152.7100 153.42 2023-12-26 05:00:00 153.56 153.975 153.0300 153.41 2023-12-27 05:00:00 153.56 154.780 153.1200 153.34 2023-12-28 05:00:00 153.72 154.080 152.9500 153.38 2023-12-29 05:00:00 153.10 153.890 151.0300 151.94 2024-01-02 05:00:00 151.54 152.380 148.3900 149.93 2024-01-03 05:00:00 145.59 147.380 144.57 2024-01-04 05:00:00 145.59 147.380 144.570 2024-01-08</td> <td>2023-12-18 05:00:00 150.56 154.855 150.0500 154.07 62512828.0 2023-12-19 05:00:00 154.40 155.120 152.6900 153.79 43171292.0 2023-12-20 05:00:00 152.90 155.630 151.5600 152.12 50322106.0 2023-12-21 05:00:00 153.30 153.970 152.1000 153.42 29514093.0 2023-12-26 05:00:00 153.56 153.975 153.0300 153.41 25067222.0 2023-12-27 05:00:00 153.56 154.780 153.1200 153.34 31434733.0 2023-12-28 05:00:00 153.72 154.080 152.9500 153.38 27057002.0 2023-12-29 05:00:00 153.10 153.890 151.030 151.94 39823204.0 2024-01-02 05:00:00 151.54 152.380 148.3900 149.93 47339424.0 2024-01-03 05:00:00 149.20 151.050 148.3300 144.57 56039807.0 2024-01-04</td>	2023-12-18 05:00:00 150.56 154.855 2023-12-19 05:00:00 154.40 155.120 2023-12-20 05:00:00 152.90 155.630 2023-12-21 05:00:00 153.30 153.970 2023-12-22 05:00:00 153.77 154.350 2023-12-26 05:00:00 153.56 153.975 2023-12-27 05:00:00 153.56 154.780 2023-12-28 05:00:00 153.72 154.080 2023-12-29 05:00:00 153.10 153.890 2024-01-02 05:00:00 153.10 153.890 2024-01-03 05:00:00 151.54 152.380 2024-01-03 05:00:00 149.20 151.050 2024-01-04 05:00:00 145.59 147.380 2024-01-05 05:00:00 144.69 146.590 2024-01-08 05:00:00 148.33 151.710 2024-01-10 05:00:00 152.06 154.420 2024-01-11 05:00:00 155.04 157.170 2024-01-12 05:00:00 153.53 154.9	2023-12-18 05:00:00 150.56 154.855 150.0500 2023-12-19 05:00:00 154.40 155.120 152.6900 2023-12-20 05:00:00 152.90 155.630 151.5600 2023-12-21 05:00:00 153.30 153.970 152.1000 2023-12-22 05:00:00 153.77 154.350 152.7100 2023-12-26 05:00:00 153.56 153.975 153.0300 2023-12-27 05:00:00 153.56 154.780 153.1200 2023-12-28 05:00:00 153.72 154.080 152.9500 2023-12-29 05:00:00 153.10 153.890 151.0300 2024-01-02 05:00:00 151.54 152.380 148.3900 2024-01-03 05:00:00 149.20 151.050 148.3300 2024-01-04 05:00:00 145.59 147.380 144.5300 2024-01-05 05:00:00 144.69 146.590 144.5300 2024-01-08 05:00:00 148.33 151.710	2023-12-18 05:00:00 150.56 154.855 150.0500 154.07 2023-12-19 05:00:00 154.40 155.120 152.6900 153.79 2023-12-20 05:00:00 152.90 155.630 151.5600 152.12 2023-12-21 05:00:00 153.30 153.970 152.1000 153.84 2023-12-26 05:00:00 153.77 154.350 152.7100 153.42 2023-12-26 05:00:00 153.56 153.975 153.0300 153.41 2023-12-27 05:00:00 153.56 154.780 153.1200 153.34 2023-12-28 05:00:00 153.72 154.080 152.9500 153.38 2023-12-29 05:00:00 153.10 153.890 151.0300 151.94 2024-01-02 05:00:00 151.54 152.380 148.3900 149.93 2024-01-03 05:00:00 145.59 147.380 144.57 2024-01-04 05:00:00 145.59 147.380 144.570 2024-01-08	2023-12-18 05:00:00 150.56 154.855 150.0500 154.07 62512828.0 2023-12-19 05:00:00 154.40 155.120 152.6900 153.79 43171292.0 2023-12-20 05:00:00 152.90 155.630 151.5600 152.12 50322106.0 2023-12-21 05:00:00 153.30 153.970 152.1000 153.42 29514093.0 2023-12-26 05:00:00 153.56 153.975 153.0300 153.41 25067222.0 2023-12-27 05:00:00 153.56 154.780 153.1200 153.34 31434733.0 2023-12-28 05:00:00 153.72 154.080 152.9500 153.38 27057002.0 2023-12-29 05:00:00 153.10 153.890 151.030 151.94 39823204.0 2024-01-02 05:00:00 151.54 152.380 148.3900 149.93 47339424.0 2024-01-03 05:00:00 149.20 151.050 148.3300 144.57 56039807.0 2024-01-04

```
27 2024-01-29 05:00:00 159.34 161.290 158.9000 161.26
                                                         45270385.0
28 2024-01-30 05:00:00 160.70 161.730 158.4900 159.00
                                                         45207430.0
29 2024-01-31 05:00:00 157.00
                             159.010 154.8100 155.20
                                                         50284371.0
30 2024-02-01 05:00:00 155.87
                              159.760 155.6200
                                                159.28
                                                         76542419.0
31 2024-02-02 05:00:00 169.19
                              172.500 167.3300 171.81
                                                        117218313.0
32 2024-02-05 05:00:00 170.20
                              170.550
                                       167.7000
                                                         55081297.0
                                                170.31
33 2024-02-06 05:00:00 169.39
                              170.710
                                      167.6500
                                                169.15
                                                         42505518.0
34 2024-02-07 05:00:00 169.48
                              170.880 168.9400 170.53
                                                         47174060.0
35 2024-02-08 05:00:00 169.65
                              171.430 168.8800 169.84
                                                         42316454.0
36 2024-02-09 05:00:00 170.90
                              175.000 170.5803 174.45
                                                         56985986.0
37 2024-02-12 05:00:00 174.80
                             175.390 171.5400 172.34
                                                         51050440.0
38 2024-02-13 05:00:00 167.73 170.950 165.7500 168.64
                                                         56345122.0
39 2024-02-14 05:00:00 169.21 171.210 168.2800 170.98
                                                         42815544.0
40 2024-02-15 05:00:00 170.58 171.170 167.5900 169.80
                                                         49855196.0
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0	153.4071	511128	None
1	153.7217	384137	None
2	153.6876	461445	None
3	153.1091	350098	None
4	153.5444	310942	None
5	153.4082	282620	None
6	153.6438	311463	None
7	153.5269	301925	None
8	152.3275	353441	None
9	149.8527	476433	None
10	149.4058	416955	None
11	145.4160	541342	None
12	145.4513	380386	None
13	148.3238	410733	None
14	150.6311	403026	None
15	153.4523	430517	None
16	155.0181	468131	None
17	154.8238	351914	None
18	153.1343	396071	None
19	151.2287	354674	None
20	153.1334	344845	None
21	154.6114	408186	None
22	154.9418	427992	None
23	155.3239	353578	None
24	157.4001	435422	None
25	157.1518	455334	None
26	159.1848	426676	None
27	160.2769	447373	None
28	159.4989	458714	None
29	156.2692	532783	None
30	160.6891	742980	None
31	170.9357	1134751	None

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32 169.5243
                    572539
                            None
33 168.8813
                    406692
                            None
34
   170.1810
                    452958
                            None
   170.2667
35
                    399952
                            None
36
  173.3948
                    549269
                            None
37
    173.2975
                    512028
                            None
38
   168.8780
                    572688
                            None
39
   170.0334
                    457093
                            None
   169.4354
40
                    521440
                            None
Combined data:
                                                         close
                                                                    volume
                   Date
                             open
                                       high
                                                   low
    2023-07-28 04:00:00
                         129.690
0
                                  133.0100
                                            129.3300
                                                        132.21
                                                                46269781.0
1
    2023-07-31 04:00:00
                         133.200
                                   133.8700
                                             132.3800
                                                        133.68
                                                                41901516.0
2
    2023-08-01 04:00:00
                         133.550
                                   133.6900
                                             131.6199
                                                        131.69
                                                                42250989.0
3
    2023-08-02 04:00:00
                         130.154
                                   130.2300
                                             126.8200
                                                        128.21
                                                                50988614.0
                                                        128.91
4
    2023-08-03 04:00:00
                         127.480
                                   129.8400
                                             126.4100
                                                                90855736.0
513 2025-08-14 04:00:00
                         227.400
                                   233.1100
                                             227.0200
                                                        230.98
                                                                61545824.0
514 2025-08-15 04:00:00
                         232.580
                                   234.0800
                                                       231.03
                                             229.8070
                                                                39649244.0
515 2025-08-18 04:00:00
                         230.225
                                   231.9100
                                             228.3300
                                                        231.49
                                                                25248890.0
516 2025-08-19 04:00:00
                         230.090
                                   230.5283
                                             227.1200
                                                        228.01
                                                                29891012.0
517 2025-08-20 04:00:00
                         227.120
                                   227.2700
                                             220.9150
                                                       223.81
                                                                36604319.0
         vwap transactions
                               otc
0
     131.8837
                     413438 None
1
                     406644
                             None
     133.3410
2
     132.2470
                     385743 None
3
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4
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                     746639
                             None
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     230.5020
                     738785
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513
514
     231.3857
                     495351
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     230.5791
515
                     371228 None
516
     228.3423
                     405021 None
517
     223.6745
                     493752 None
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Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2024-02-14 00:00:00 thru 2024-04-14 00:00:00 for AMZN...

```
Date
                                                 low
                                                        close
                                                                   volume
                           open
                                     high
                                                      170.980
  2024-02-14 05:00:00 169.210
                                 171.2100
                                           168.2800
                                                               42815544.0
1
  2024-02-15 05:00:00
                        170.580
                                 171.1700
                                           167.5900
                                                      169.800
                                                               49855196.0
2 2024-02-16 05:00:00
                        168.740
                                 170.4200
                                           167.1700
                                                      169.510
                                                               48107744.0
3 2024-02-20 05:00:00
                        167.830
                                 168.7100
                                           165.7400
                                                      167.080
                                                               41980326.0
```

```
2024-02-21 05:00:00
                         168.940
                                   170.2300
                                             167.1400
                                                        168.590
                                                                  44575623.0
5
  2024-02-22 05:00:00
                         173.100
                                   174.8000
                                             171.7700
                                                        174.580
                                                                  55392354.0
   2024-02-23 05:00:00
                         174.280
                                   175.7500
                                                        174.990
6
                                             173.7000
                                                                  59715243.0
7
   2024-02-26 05:00:00
                         175.700
                                   176.3700
                                                        174.730
                                              174.2600
                                                                  44368614.0
8
   2024-02-27 05:00:00
                         174.075
                                   174.6200
                                              172.8600
                                                        173.540
                                                                  31141732.0
   2024-02-28 05:00:00
                         172.440
                                   174.0500
                                              172.2700
                                                        173.160
                                                                  28180482.0
10 2024-02-29 05:00:00
                         173.010
                                   177.2200
                                              172.8500
                                                        176.760
                                                                  53805359.0
                                              176.0700
11 2024-03-01 05:00:00
                         176.750
                                   178.7250
                                                        178.220
                                                                  31981152.0
12 2024-03-04 05:00:00
                         177.530
                                   180.1400
                                              177.4900
                                                        177.580
                                                                  37381520.0
13 2024-03-05 05:00:00
                         176.930
                                   176.9300
                                              173.3030
                                                        174.120
                                                                  37228343.0
14 2024-03-06 05:00:00
                         175.540
                                   176.4600
                                                        173.510
                                              173.2600
                                                                  32090926.0
15 2024-03-07 05:00:00
                         174.830
                                   177.9900
                                              173.7200
                                                        176.820
                                                                  34063283.0
16 2024-03-08 05:00:00
                         176.440
                                   178.7850
                                                        175.350
                                              174.3300
                                                                  37893242.0
17 2024-03-11 04:00:00
                         174.310
                                   174.4700
                                              171.4700
                                                        171.960
                                                                  28484777.0
18 2024-03-12 04:00:00
                         173.500
                                   176.7600
                                              171.9800
                                                        175.390
                                                                  36610604.0
19 2024-03-13 04:00:00
                         175.900
                                   177.6200
                                              175.5500
                                                        176.555
                                                                  30772600.0
20 2024-03-14 04:00:00
                         177.690
                                   179.5300
                                              176.4650
                                                        178.750
                                                                  43705840.0
21 2024-03-15 04:00:00
                                   177.9300
                                                        174.420
                         176.640
                                              173.9000
                                                                  72147390.0
22 2024-03-18 04:00:00
                         175.800
                                   176.6900
                                                        174.480
                                                                  31250688.0
                                              174.2800
23 2024-03-19 04:00:00
                         174.215
                                   176.0900
                                              173.5200
                                                        175.900
                                                                  26880893.0
24 2024-03-20 04:00:00
                         176.140
                                   178.5300
                                              174.6400
                                                        178.150
                                                                  29947150.0
25 2024-03-21 04:00:00
                         179.988
                                   181.4150
                                              178.1500
                                                        178.150
                                                                  32824320.0
26 2024-03-22 04:00:00
                         177.752
                                   179.2550
                                              176.7500
                                                        178.870
                                                                  27995378.0
27 2024-03-25 04:00:00
                         178.010
                                   180.9900
                                              177.2400
                                                        179.710
                                                                  29815464.0
28 2024-03-26 04:00:00
                         180.150
                                   180.4500
                                              177.9500
                                                        178.300
                                                                  29658982.0
29 2024-03-27 04:00:00
                         179.880
                                   180.0000
                                              177.3099
                                                        179.830
                                                                  33272551.0
30 2024-03-28 04:00:00
                                   181.7000
                         180.170
                                              179.2600
                                                        180.380
                                                                  38051588.0
31 2024-04-01 04:00:00
                         180.790
                                   183.0000
                                              179.9500
                                                        180.970
                                                                  29174521.0
32 2024-04-02 04:00:00
                         179.070
                                   180.7900
                                              178.3762
                                                        180.690
                                                                  32611546.0
33 2024-04-03 04:00:00
                         179.900
                                   182.8700
                                              179.8000
                                                        182.410
                                                                  31046638.0
34 2024-04-04 04:00:00
                         184.000
                                   185.1000
                                              180.0000
                                                        180.000
                                                                  41624261.0
35 2024-04-05 04:00:00
                         182.380
                                   186.2700
                                              181.9700
                                                        185.070
                                                                  42373992.0
36 2024-04-08 04:00:00
                         186.900
                                   187.2900
                                              184.8100
                                                        185.190
                                                                  39221282.0
37 2024-04-09 04:00:00
                         187.240
                                   187.3400
                                              184.2000
                                                        185.670
                                                                  36546946.0
38 2024-04-10 04:00:00
                         182.765
                                   186.2699
                                              182.6700
                                                        185.950
                                                                  35879151.0
39 2024-04-11 04:00:00
                         186.740
                                   189.7700
                                              185.5100
                                                        189.050
                                                                  40020742.0
40 2024-04-12 04:00:00
                         187.720
                                   188.3800
                                              185.0800
                                                        186.130
                                                                  38608849.0
              transactions
        vwap
                               otc
0
    170.0334
                     457093
                             None
1
    169.4354
                     521440
                             None
2
    169.1823
                     468195
                              None
3
    166.9099
                     478320
                              None
4
    168.5460
                     466026
                              None
5
    173.5407
                     547144
                             None
6
    174.7441
                     467172
                             None
7
    174.9955
                     428536
                             None
8
    173.7541
                     357527
                             None
```

```
9
                     328701
    173.3190
                              None
10
    175.7037
                     446966
                              None
    177.8612
                     406700
11
                              None
12
    178.5391
                     443556
                              None
13
    174.4669
                     448860
                              None
14
    174.3209
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                              None
15
    176.4306
                     379859
                              None
16
    176.2105
                     443161
                              None
17
    172.4231
                     409871
                              None
18
    175.3076
                     416722
                              None
19
    176.7291
                     362923
                              None
20
    178.4157
                     461845
                              None
21
    175.0466
                     465353
                              None
22
    175.0880
                     358797
                              None
23
    175.3685
                     318062
                              None
    176.6897
24
                     355615
                              None
25
    179.3211
                     377254
                              None
26
                     295011
    178.5495
                              None
27
    179.6492
                     352597
                              None
28
    179.1228
                     326743
                              None
29
    179.1069
                     341921
                              None
30
    180.4863
                     364803
                              None
31
    180.9175
                     370612
                              None
32
    180.0750
                     355849
                              None
33
    182.0849
                     350783
                              None
34
    182.5315
                     465372
                              None
35
    184.7021
                     465500
                              None
36
    185.8041
                     427793
                              None
37
    185.5047
                     400971
                              None
38
    185.0344
                     448182
                              None
                     445674
39
    187.9700
                              None
40
    186.5613
                     420407
                              None
Combined data:
                                                                       volume
                    Date
                              open
                                         high
                                                     low
                                                           close
                                                                   46269781.0
0
    2023-07-28 04:00:00
                           129.690
                                     133.0100
                                               129.3300
                                                          132.21
1
    2023-07-31 04:00:00
                           133.200
                                     133.8700
                                                132.3800
                                                          133.68
                                                                   41901516.0
2
    2023-08-01 04:00:00
                           133.550
                                     133.6900
                                                131.6199
                                                          131.69
                                                                   42250989.0
3
    2023-08-02 04:00:00
                           130.154
                                     130.2300
                                                126.8200
                                                          128.21
                                                                   50988614.0
    2023-08-03 04:00:00
4
                           127.480
                                     129.8400
                                                126.4100
                                                          128.91
                                                                   90855736.0
                           227.400
                                               227.0200
                                                          230.98
513 2025-08-14 04:00:00
                                     233.1100
                                                                   61545824.0
514 2025-08-15 04:00:00
                           232.580
                                     234.0800
                                                229.8070
                                                          231.03
                                                                   39649244.0
515 2025-08-18 04:00:00
                           230.225
                                     231.9100
                                                228.3300
                                                          231.49
                                                                   25248890.0
516 2025-08-19 04:00:00
                           230.090
                                     230.5283
                                                227.1200
                                                          228.01
                                                                   29891012.0
517 2025-08-20 04:00:00
                           227.120
                                     227.2700
                                                220.9150
                                                          223.81
                                                                   36604319.0
                transactions
                                otc
         vwap
0
     131.8837
                      413438
                               None
```

```
406644 None
1
    133.3410
2
    132.2470
                    385743 None
3
    128.3973
                    532942 None
4
    131.4941
                    746639 None
. .
513 230.5020
                    738785 None
                    495351 None
514 231.3857
                    371228 None
515 230.5791
516 228.3423
                    405021 None
517 223.6745
                    493752 None
```

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2024-04-13 00:00:00 thru 2024-06-12 00:00:00 for AMZN...

		Date	open	high	low	close	volume	\
0	2024-04-15	04:00:00	187.425	188.6900	183.0000	183.62	48052395.0	
1	2024-04-16	04:00:00	183.270	184.8300	182.2600	183.32	32891265.0	
2	2024-04-17	04:00:00	184.310	184.5700	179.8200	181.28	31359673.0	
3	2024-04-18	04:00:00	181.470	182.3900	178.6500	179.22	30723793.0	
4	2024-04-19	04:00:00	178.740	179.0000	173.4400	174.63	56000729.0	
5	2024-04-22	04:00:00	176.940	178.8700	174.5600	177.23	37924890.0	
6	2024-04-23	04:00:00	178.080	179.9300	175.9750	179.54	37046519.0	
7	2024-04-24	04:00:00	179.940	180.3230	176.1800	176.59	34185109.0	
8	2024-04-25	04:00:00	169.680	173.9200	166.3200	173.67	49249390.0	
9	2024-04-26	04:00:00	177.795	180.8200	176.1300	179.62	43919765.0	
10	2024-04-29	04:00:00	182.750	183.5300	179.3900	180.96	54063937.0	
11	2024-04-30	04:00:00	181.090	182.9900	174.8000	175.00	94639786.0	
12	2024-05-01	04:00:00	181.635	185.1500	176.5600	179.00	94645148.0	
13	2024-05-02	04:00:00	180.850	185.1000	179.9100	184.72	54303510.0	
14	2024-05-03	04:00:00	186.990	187.8700	185.4200	186.21	39172004.0	
15	2024-05-06	04:00:00	186.280	188.7450	184.8000	188.70	34725295.0	
16	2024-05-07	04:00:00	188.920	189.9400	187.3050	188.76	34048902.0	
17	2024-05-08	04:00:00	187.440	188.4300	186.3850	188.00	26136350.0	
18	2024-05-09	04:00:00	188.880	191.7000	187.4400	189.50	43368377.0	
19	2024-05-10	04:00:00	189.160	189.8920	186.9300	187.48	34141771.0	
20	2024-05-13	04:00:00	188.000	188.3100	185.3600	186.57	24898613.0	
21	2024-05-14	04:00:00	183.820	187.7200	183.4500	187.07	38698155.0	
22	2024-05-15	04:00:00	185.970	186.7193	182.7300	185.99	75459927.0	
23	2024-05-16	04:00:00	185.600	187.3100	183.4600	183.63	38834450.0	
24	2024-05-17	04:00:00	183.760	185.3000	183.3500	184.70	33175655.0	
25	2024-05-20	04:00:00	184.340	186.6650	183.2800	183.54	30511768.0	
26	2024-05-21	04:00:00	182.300	183.2600	180.7500	183.15	50839129.0	
27	2024-05-22	04:00:00	183.880	185.2200	181.9715	183.13	28148784.0	
28	2024-05-23	04:00:00	183.660	184.7600	180.0800	181.05	33670173.0	

```
29 2024-05-24 04:00:00 181.650
                                182.4350
                                          180.3000
                                                    180.75 27471640.0
30 2024-05-28 04:00:00 179.930
                                182.2400
                                          179.4900
                                                    182.15
                                                            29926963.0
31 2024-05-29 04:00:00
                       181.700
                                184.0800
                                          181.5500
                                                    182.02
                                                            32009294.0
32 2024-05-30 04:00:00
                       181.310
                                181.3400
                                                    179.32
                                                            29249229.0
                                          178.3550
33 2024-05-31 04:00:00
                       178.300
                                179.2100
                                          173.8700
                                                    176.44
                                                            58903939.0
34 2024-06-03 04:00:00
                       177.700
                                178.7000
                                                    178.34
                                                            30786640.0
                                          175.9200
35 2024-06-04 04:00:00
                       177.640
                                179.8200
                                          176.4400
                                                    179.34
                                                            27198388.0
36 2024-06-05 04:00:00
                       180.100
                                181.5000
                                          178.7500
                                                    181.28
                                                            32116394.0
37 2024-06-06 04:00:00
                       181.745
                                185.0000
                                                    185.00 31371151.0
                                          181.4900
38 2024-06-07 04:00:00
                       184.900
                                186.2888
                                          183.3600
                                                    184.30
                                                            28021473.0
39 2024-06-10 04:00:00
                       184.070
                                187.2300
                                          183.7900
                                                    187.06
                                                            34494498.0
40 2024-06-11 04:00:00 187.060
                                                    187.23 27265108.0
                                187.7700
                                          184.5373
41 2024-06-12 04:00:00 188.015 188.3500 185.4300
                                                    186.89 33984216.0
```

	vwap	transactions	otc
0	185.4571	507835	None
1	183.6970	400887	None
2	182.0367	395806	None
3	180.2611	383902	None
4	175.5315	569859	None
5	176.7253	396300	None
6	178.5315	379412	None
7	177.2280	405353	None
8	172.0357	618272	None
9	178.9723	478171	None
10	180.6619	592823	None
11	178.7014	852830	None
12	180.3923	964487	None
13	183.1937	529460	None
14	186.4278	413924	None
15	187.0583	394638	None
16	188.7466	400757	None
17	187.6368	306857	None
18	189.9402	460881	None
19	188.0349	355996	None
20	186.4346	333255	None
21	185.9235	426722	None
22	184.7315	786217	None
23	185.1924	411940	None
24	184.5362	339447	None
25	184.4488	371996	None
26	181.8687	515624	None
27	183.4584	344846	None
28	182.1214	384775	None
29	181.3674	333234	None
30	181.1801	401075	None
31	182.6075	361239	None
32	179.8024	392763	None

```
33 175.6595
                   614468 None
34 177.3956
                   415225 None
35 178.5865
                   329595
                           None
36 180.7343
                   362053 None
37 183.7391
                   374051 None
38 184.8873
                   336108 None
39 186.4005
                   385196 None
40 186.2675
                   341795 None
41 187.0695
                   443192 None
Combined data:
                                                     close
                  Date
                           open
                                     high
                                               low
                                                                volume \
   2023-07-28 04:00:00
                       129.690 133.0100 129.3300 132.21
0
                                                            46269781.0
1
   2023-07-31 04:00:00
                       133.200 133.8700
                                          132.3800 133.68
                                                            41901516.0
2
   2023-08-01 04:00:00
                       133.550 133.6900
                                          131.6199
                                                   131.69
                                                            42250989.0
3
   2023-08-02 04:00:00
                        130.154
                                130.2300
                                          126.8200
                                                   128.21
                                                            50988614.0
   2023-08-03 04:00:00
                       127.480 129.8400
                                                    128.91
                                          126.4100
                                                            90855736.0
513 2025-08-14 04:00:00
                        227.400
                                 233.1100 227.0200
                                                    230.98
                                                            61545824.0
514 2025-08-15 04:00:00 232.580 234.0800
                                          229.8070 231.03
                                                            39649244.0
515 2025-08-18 04:00:00
                        230.225
                                231.9100
                                          228.3300 231.49
                                                            25248890.0
516 2025-08-19 04:00:00
                        230.090 230.5283
                                          227.1200
                                                   228.01
                                                            29891012.0
517 2025-08-20 04:00:00 227.120
                                227.2700 220.9150 223.81
                                                            36604319.0
        vwap transactions
                             otc
0
                    413438 None
    131.8837
1
                    406644 None
    133.3410
2
    132.2470
                    385743 None
3
    128.3973
                    532942 None
4
    131.4941
                    746639 None
. .
   230.5020
                    738785
513
                           None
514
    231.3857
                    495351
                           None
515
    230.5791
                    371228 None
    228.3423
                    405021 None
516
517
    223.6745
                    493752 None
```

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2024-06-11 00:00:00 thru 2024-08-10 00:00:00 for AMZN...

		Date	open	high	low	close	volume	\
0	2024-06-11 04	:00:00 1	.87.060	187.7700	184.5373	187.23	27265108.0	
1	2024-06-12 04	:00:00 1	.88.015	188.3500	185.4300	186.89	33984216.0	
2	2024-06-13 04	:00:00 1	.86.090	187.6700	182.6660	183.83	39721545.0	
3	2024-06-14 04	:00:00 1	.83.080	183.7200	182.2300	183.66	25456410.0	

```
2024-06-17 04:00:00
                         182.520
                                   185.0000
                                              181.2200
                                                        184.06
                                                                  35601907.0
5
   2024-06-18 04:00:00
                         183.735
                                   184.2900
                                              181.4300
                                                        182.81
                                                                  36659157.0
   2024-06-20 04:00:00
                         182.910
                                   186.5100
                                                        186.10
6
                                              182.7200
                                                                  44726779.0
7
   2024-06-21 04:00:00
                         187.800
                                   189.2750
                                              185.8600
                                                        189.08
                                                                  72931754.0
8
   2024-06-24 04:00:00
                         189.330
                                   191.0000
                                              185.3300
                                                        185.57
                                                                  50610379.0
   2024-06-25 04:00:00
                         186.810
                                   188.8400
                                              185.4200
                                                        186.34
                                                                  45898475.0
10 2024-06-26 04:00:00
                         186.920
                                   194.8000
                                              186.2600
                                                        193.61
                                                                  65103893.0
11 2024-06-27 04:00:00
                         195.005
                                   199.8400
                                              194.2000
                                                        197.85
                                                                  74397491.0
12 2024-06-28 04:00:00
                         197.730
                                   198.8500
                                              192.5000
                                                        193.25
                                                                  76930192.0
13 2024-07-01 04:00:00
                         193.490
                                   198.2957
                                              192.8200
                                                        197.20
                                                                  41192011.0
14 2024-07-02 04:00:00
                         197.280
                                   200.4300
                                                        200.00
                                                                  45600013.0
                                              195.9300
15 2024-07-03 04:00:00
                         199.940
                                   200.0290
                                              196.7601
                                                        197.59
                                                                  31597926.0
16 2024-07-05 04:00:00
                         198.650
                                   200.5500
                                                        200.00
                                              198.1700
                                                                  39858885.0
17 2024-07-08 04:00:00
                         200.040
                                   201.2000
                                              197.9600
                                                        199.29
                                                                  34767261.0
18 2024-07-09 04:00:00
                         199.400
                                   200.5700
                                              199.0450
                                                        199.34
                                                                  32756736.0
19 2024-07-10 04:00:00
                         199.995
                                   200.1100
                                                        199.79
                                              197.6900
                                                                  32883753.0
20 2024-07-11 04:00:00
                         200.090
                                   200.2699
                                              192.8600
                                                        195.05
                                                                  44565041.0
21 2024-07-12 04:00:00
                         194.800
                                   196.4700
                                                        194.49
                                              193.8301
                                                                  30598525.0
22 2024-07-15 04:00:00
                         194.560
                                   196.1900
                                              190.8300
                                                        192.72
                                                                  40683227.0
23 2024-07-16 04:00:00
                         195.590
                                   196.6200
                                              192.2400
                                                        193.02
                                                                  33994714.0
24 2024-07-17 04:00:00
                         191.350
                                   191.5800
                                              185.9900
                                                        187.93
                                                                  48076139.0
25 2024-07-18 04:00:00
                         189.590
                                   189.6800
                                              181.4480
                                                        183.75
                                                                  51043626.0
26 2024-07-19 04:00:00
                         181.140
                                   184.9300
                                              180.1100
                                                        183.13
                                                                  43081829.0
27 2024-07-22 04:00:00
                         185.000
                                   185.0600
                                              182.4800
                                                        182.55
                                                                  39931923.0
28 2024-07-23 04:00:00
                         184.100
                                   189.3900
                                                        186.41
                                                                  47537670.0
                                              183.5600
29 2024-07-24 04:00:00
                         183.200
                                   185.4500
                                              180.4100
                                                        180.83
                                                                  41532360.0
30 2024-07-25 04:00:00
                         182.910
                                   183.8958
                                              176.8000
                                                        179.85
                                                                  44464163.0
31 2024-07-26 04:00:00
                         180.390
                                   183.1900
                                              180.2400
                                                        182.50
                                                                  29505964.0
32 2024-07-29 04:00:00
                         183.840
                                   184.7500
                                              182.3800
                                                        183.20
                                                                  33270123.0
33 2024-07-30 04:00:00
                         184.720
                                   185.8600
                                              179.3800
                                                        181.71
                                                                  39508574.0
34 2024-07-31 04:00:00
                                   187.9400
                                                        186.98
                         185.050
                                              184.4600
                                                                  41667326.0
35 2024-08-01 04:00:00
                         189.285
                                   190.6000
                                              181.8700
                                                        184.07
                                                                  70435635.0
36 2024-08-02 04:00:00
                         166.750
                                   168.7700
                                              160.5500
                                                        167.90
                                                                 141448365.0
37 2024-08-05 04:00:00
                         154.210
                                   162.9600
                                                        161.02
                                              151.6100
                                                                  83149437.0
                                                                  59950830.0
38 2024-08-06 04:00:00
                         161.710
                                   165.0800
                                              158.5404
                                                        161.93
39 2024-08-07 04:00:00
                         166.550
                                   167.5800
                                              161.4300
                                                        162.77
                                                                  48408240.0
40 2024-08-08 04:00:00
                         165.165
                                   166.6899
                                              162.5500
                                                        165.80
                                                                  44616206.0
41 2024-08-09 04:00:00
                         166.400
                                   168.5500
                                              165.8500
                                                        166.94
                                                                  36401049.0
              transactions
                               otc
        vwap
0
    186.2675
                     341795
                             None
1
    187.0695
                     443192
                             None
2
    184.4373
                     422857
                              None
3
    183.2123
                     307405
                             None
4
    183.3132
                     432322
                             None
5
    182.6619
                     390343
                             None
6
    185.1798
                     471760
                             None
7
    188.1272
                     435848
                             None
```

```
8
    187.2457
                      535367
                              None
9
    186.9520
                      382085
                              None
                     649554
10
    192.1117
                              None
11
    197.3191
                      721971
                              None
12
    194.6710
                      605538
                              None
13
    196.1129
                      501335
                              None
14
    198.7859
                      485437
                              None
15
    198.0371
                      395364
                              None
16
    199.8638
                      451244
                              None
                              None
17
    199.4211
                      443701
    199.7893
                      379497
18
                              None
19
    199.2791
                      414183
                              None
20
                      582321
    195.7606
                              None
21
    194.9444
                      427388
                              None
22
    193.0188
                      571566
                              None
23
    193.6997
                      449302
                              None
24
    187.6363
                      682876
                              None
25
    184.4092
                      672039
                              None
26
    182.8750
                      482540
                              None
27
    183.3798
                      448824
                              None
28
    187.1186
                      489929
                              None
29
    182.2157
                      506965
                              None
30
    180.8787
                      548308
                              None
31
    181.9844
                      375650
                              None
32
    183.4509
                      350828
                              None
33
    181.6782
                      442154
                              None
34
    186.5551
                     474654
                              None
35
    183.4888
                      855378
                              None
36
    165.5385
                     1668927
                              None
37
    159.7718
                     1147517
                              None
38
    162.2895
                     674745
                              None
39
    164.3705
                      571697
                              None
    165.2136
40
                      483376
                              None
41
    167.0036
                      394854
                              None
Combined data:
                    Date
                              open
                                         high
                                                     low
                                                            close
                                                                        volume
0
    2023-07-28 04:00:00
                           129.690
                                     133.0100
                                                129.3300
                                                           132.21
                                                                    46269781.0
1
    2023-07-31 04:00:00
                           133.200
                                     133.8700
                                                132.3800
                                                           133.68
                                                                    41901516.0
2
    2023-08-01 04:00:00
                           133.550
                                     133.6900
                                                131.6199
                                                           131.69
                                                                    42250989.0
3
    2023-08-02 04:00:00
                           130.154
                                     130.2300
                                                126.8200
                                                           128.21
                                                                    50988614.0
4
    2023-08-03 04:00:00
                           127.480
                                     129.8400
                                                126.4100
                                                           128.91
                                                                    90855736.0
513 2025-08-14 04:00:00
                           227.400
                                     233.1100
                                                227.0200
                                                           230.98
                                                                    61545824.0
514 2025-08-15 04:00:00
                           232.580
                                     234.0800
                                                229.8070
                                                           231.03
                                                                    39649244.0
515 2025-08-18 04:00:00
                           230.225
                                     231.9100
                                                228.3300
                                                           231.49
                                                                    25248890.0
516 2025-08-19 04:00:00
                           230.090
                                     230.5283
                                                227.1200
                                                           228.01
                                                                    29891012.0
517 2025-08-20 04:00:00
                           227.120
                                     227.2700
                                                220.9150
                                                           223.81
                                                                    36604319.0
```

	vwap	transactions	otc
0	131.8837	413438	None
1	133.3410	406644	None
2	132.2470	385743	None
3	128.3973	532942	None
4	131.4941	746639	None
	•••	•••	
513	230.5020	738785	None
514	231.3857	495351	None
515	230.5791	371228	None
516	228.3423	405021	None
517	223.6745	493752	None

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2024-08-09 00:00:00 thru 2024-10-08 00:00:00 for AMZN...

		Date	open	high	low	close	volume	\
0	2024-08-09	04:00:00	166.400	168.5500	165.8500	166.94	36401049.0	
1	2024-08-12	04:00:00	168.140	168.5500	166.1101	166.80	30072788.0	
2	2024-08-13	04:00:00	167.810	171.0400	167.1000	170.23	39237915.0	
3	2024-08-14	04:00:00	172.110	172.2800	168.8600	170.10	28843804.0	
4	2024-08-15	04:00:00	174.860	177.9100	173.9900	177.59	51698513.0	
5	2024-08-16	04:00:00	177.040	178.3400	176.2601	177.06	31489175.0	
6	2024-08-19	04:00:00	177.640	178.3000	176.1600	178.22	31129807.0	
7	2024-08-20	04:00:00	177.920	179.0100	177.4308	178.88	26255204.0	
8	2024-08-21	04:00:00	179.920	182.3850	178.8937	180.11	35599120.0	
9	2024-08-22	04:00:00	181.380	181.4700	175.6800	176.13	32047482.0	
10	2024-08-23	04:00:00	177.340	178.9699	175.2400	177.04	29150091.0	
11	2024-08-26	04:00:00	176.700	177.4682	174.3000	175.50	22366236.0	
12	2024-08-27	04:00:00	174.150	174.8900	172.2500	173.12	29841979.0	
13	2024-08-28	04:00:00	173.690	173.6900	168.9200	170.80	29045025.0	
14	2024-08-29	04:00:00	173.220	174.2900	170.8100	172.12	26407815.0	
15	2024-08-30	04:00:00	172.780	178.9000	172.6000	178.50	43429355.0	
16	2024-09-03	04:00:00	177.550	178.2600	175.2600	176.25	37817511.0	
17	2024-09-04	04:00:00	174.480	175.9800	172.5400	173.33	30309225.0	
18	2024-09-05	04:00:00	175.000	179.8750	174.9950	177.89	40170526.0	
19	2024-09-06	04:00:00	177.240	178.3800	171.1600	171.39	41466537.0	
20	2024-09-09	04:00:00	174.530	175.8500	173.5100	175.40	29037362.0	
21	2024-09-10	04:00:00	177.490	180.5000	176.7900	179.55	36233796.0	
22	2024-09-11	04:00:00	180.095	184.9900	175.7300	184.52	42564698.0	
23	2024-09-12	04:00:00	184.800	187.4100	183.5400	187.00	33622483.0	
24	2024-09-13	04:00:00	187.000	188.5000	185.9100	186.49	26495351.0	
25	2024-09-16	04:00:00	185.290	185.8100	183.3600	184.89	26065485.0	
26	2024-09-17	04:00:00	186.850	189.4500	186.1400	186.88	26091682.0	

```
27 2024-09-18 04:00:00 186.450
                                  188.8000
                                            185.0600
                                                      186.43
                                                                34448130.0
28 2024-09-19 04:00:00
                        190.040
                                  190.9900
                                            188.4700
                                                       189.87
                                                                39543168.0
29 2024-09-20 04:00:00
                        190.230
                                  191.8400
                                            187.4100
                                                       191.60
                                                               100378553.0
30 2024-09-23 04:00:00
                        191.640
                                  194.4500
                                                       193.88
                                            190.5700
                                                                36993111.0
31 2024-09-24 04:00:00
                         194.270
                                  195.3700
                                            190.1300
                                                       193.96
                                                                43478926.0
32 2024-09-25 04:00:00
                         193.750
                                                       192.53
                                                                26391144.0
                                  193.9498
                                            192.1600
33 2024-09-26 04:00:00
                        194.310
                                  194.5300
                                            189.5400
                                                       191.16
                                                                36334854.0
34 2024-09-27 04:00:00
                        190.680
                                  190.9000
                                            187.3400
                                                      187.97
                                                                36002316.0
35 2024-09-30 04:00:00
                        187.140
                                  188.4900
                                            184.6500
                                                      186.33
                                                                41680400.0
36 2024-10-01 04:00:00
                        184.900
                                  186.1900
                                            183.4519
                                                       185.13
                                                                36044906.0
37 2024-10-02 04:00:00
                        184.440
                                  186.6000
                                            184.0400
                                                       184.76
                                                                23704056.0
38 2024-10-03 04:00:00
                        183.045
                                  183.4400
                                            180.8750
                                                       181.96
                                                                30204302.0
39 2024-10-04 04:00:00
                        185.750
                                  187.6000
                                            183.6000
                                                       186.51
                                                                41079011.0
40 2024-10-07 04:00:00
                        182.950
                                  183.6000
                                            180.2500
                                                       180.80
                                                                42364201.0
41 2024-10-08 04:00:00 181.915
                                  183.0900
                                            180.9200
                                                      182.72
                                                                26372086.0
```

	vwap	transactions	otc
0	167.0036	394854	None
1	167.2266	393788	None
2	169.2246	411872	None
3	170.2211	376508	None
4	176.3421	530507	None
5	177.4409	368932	None
6	177.6116	358311	None
7	178.3947	302465	None
8	180.3652	398151	None
9	177.5877	402700	None
10	177.0898	359923	None
11	175.6982	337930	None
12	173.2261	377150	None
13	170.8395	382296	None
14	172.7424	358875	None
15	176.5814	398639	None
16	176.4646	466728	None
17	173.9051	378823	None
18	177.6231	458086	None
19	172.7411	447653	None
20	174.7837	347055	None
21	179.1290	419587	None
22	181.2208	465492	None
23	186.0135	431083	None
24	187.1696	338171	None
25	184.6797	353780	None
26	187.5174	351410	None
27	186.7645	381348	None
28	189.6779	422926	None
29	190.8708	430701	None
30	193.0995	405139	None

```
31 193.0480
                    404498
                            None
                    320595
32 192.7974
                            None
33
   191.3116
                    411701
                            None
34
                    401802
   188.6334
                            None
35
   186.2158
                    440558
                            None
36
    184.7147
                    440041
                            None
37
    185.1407
                    314477
                            None
   182.1979
38
                    398492
                            None
                    431150 None
39 185.7307
40 181.2782
                    520248
                            None
                    314225
41
   182.3367
                            None
Combined data:
                                                        close
                   Date
                             open
                                       high
                                                  low
                                                                    volume
0
    2023-07-28 04:00:00
                         129.690
                                  133.0100
                                             129.3300
                                                       132.21
                                                                46269781.0
1
    2023-07-31 04:00:00
                         133.200
                                   133.8700
                                             132.3800
                                                       133.68
                                                                41901516.0
                                                       131.69
    2023-08-01 04:00:00
                         133.550
                                   133.6900
                                             131.6199
                                                                42250989.0
3
    2023-08-02 04:00:00
                         130.154
                                   130.2300
                                             126.8200
                                                       128.21
                                                                50988614.0
4
    2023-08-03 04:00:00
                         127.480
                                   129.8400
                                             126.4100
                                                        128.91
                                                                90855736.0
513 2025-08-14 04:00:00
                         227.400
                                   233.1100
                                             227.0200
                                                       230.98
                                                                61545824.0
514 2025-08-15 04:00:00
                         232.580
                                   234.0800
                                             229.8070
                                                       231.03
                                                                39649244.0
515 2025-08-18 04:00:00
                         230.225
                                   231.9100
                                             228.3300
                                                       231.49
                                                                25248890.0
                                             227.1200
516 2025-08-19 04:00:00
                         230.090
                                   230.5283
                                                       228.01
                                                                29891012.0
517 2025-08-20 04:00:00
                         227.120
                                   227.2700
                                             220.9150 223.81
                                                                36604319.0
               transactions
                               otc
         vwap
0
     131.8837
                     413438 None
1
     133.3410
                     406644
                             None
2
     132.2470
                     385743
                             None
3
     128.3973
                     532942
                             None
4
     131.4941
                     746639
                             None
. .
513
     230.5020
                     738785
                             None
514
     231.3857
                             None
                     495351
515
     230.5791
                     371228 None
516
     228.3423
                     405021
                             None
517
     223.6745
                     493752
                             None
```

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2024-10-07 00:00:00 thru 2024-12-06 00:00:00 for AMZN...

```
high
                                                     close
                                                                volume \
               Date
                         open
                                              low
                     182.950
2024-10-07 04:00:00
                               183.6000
                                         180.2500
                                                    180.80
                                                            42364201.0
2024-10-08 04:00:00
                     181.915
                               183.0900
                                         180.9200
                                                    182.72
                                                            26372086.0
```

```
2024-10-09 04:00:00
                         182.820
                                   185.8450
                                             182.0500
                                                        185.17
                                                                26343117.0
3
   2024-10-10 04:00:00
                         187.130
                                   188.1340
                                             185.8300
                                                        186.65
                                                                27785043.0
4
   2024-10-11 04:00:00
                         186.630
                                   189.9284
                                             186.3000
                                                        188.82
                                                                25751557.0
   2024-10-14 04:00:00
                         189.780
                                   189.8300
                                                        187.54
5
                                             187.3600
                                                                22614407.0
6
   2024-10-15 04:00:00
                         187.630
                                   188.4100
                                             184.5800
                                                        187.69
                                                                32178925.0
7
                                   187.7800
   2024-10-16 04:00:00
                         187.050
                                             185.6100
                                                        186.89
                                                                23456812.0
   2024-10-17 04:00:00
                         188.220
                                   188.9400
                                             186.0000
                                                        187.53
                                                                25039414.0
9
   2024-10-18 04:00:00
                         187.150
                                   190.7400
                                             186.2800
                                                        188.99
                                                                37417670.0
10 2024-10-21 04:00:00
                         188.050
                                   189.4600
                                             186.4000
                                                        189.07
                                                                24639393.0
11 2024-10-22 04:00:00
                         188.350
                                   191.5201
                                             186.9750
                                                        189.70
                                                                29650593.0
12 2024-10-23 04:00:00
                         188.850
                                   189.1600
                                             183.6900
                                                        184.71
                                                                31937089.0
13 2024-10-24 04:00:00
                         185.250
                                   187.1100
                                             183.8600
                                                        186.38
                                                                21647395.0
14 2024-10-25 04:00:00
                         187.850
                                   190.4500
                                                                29362060.0
                                             187.5300
                                                        187.83
15 2024-10-28 04:00:00
                         189.565
                                   190.2100
                                             188.2100
                                                        188.39
                                                                27930836.0
16 2024-10-29 04:00:00
                         188.580
                                   191.4599
                                             187.8150
                                                        190.83
                                                                35690158.0
17 2024-10-30 04:00:00
                         194.695
                                   195.6100
                                                        192.73
                                             192.4200
                                                                37707550.0
18 2024-10-31 04:00:00
                         190.510
                                   190.6000
                                             185.2300
                                                        186.40
                                                                75146759.0
19 2024-11-01 04:00:00
                         199.000
                                   200.5000
                                                        197.93
                                             197.0200
                                                                99687847.0
20 2024-11-04 05:00:00
                         196.450
                                   197.3300
                                             194.3101
                                                        195.78
                                                                38492062.0
21 2024-11-05 05:00:00
                         196.040
                                   199.8200
                                             195.9900
                                                        199.50
                                                                30564784.0
22 2024-11-06 05:00:00
                         200.010
                                   207.5500
                                             199.1400
                                                        207.09
                                                                72292167.0
                         207.440
23 2024-11-07 05:00:00
                                   212.2500
                                             207.1900
                                                        210.05
                                                                52878383.0
24 2024-11-08 05:00:00
                         209.720
                                   209.9633
                                             207.4400
                                                        208.18
                                                                36075846.0
25 2024-11-11 05:00:00
                         208.500
                                   209.6500
                                             205.5900
                                                        206.84
                                                                35456012.0
26 2024-11-12 05:00:00
                         208.370
                                   209.5400
                                             206.0100
                                                        208.91
                                                                38942918.0
                         209.400
                                                        214.10
27 2024-11-13 05:00:00
                                   215.0900
                                             209.1400
                                                                46212943.0
                         214.160
28 2024-11-14 05:00:00
                                   215.9000
                                             210.8800
                                                        211.48
                                                                42620309.0
29 2024-11-15 05:00:00
                         206.760
                                   207.3400
                                             199.6100
                                                        202.61
                                                                86591144.0
                         204.150
                                                        201.70
30 2024-11-18 05:00:00
                                   204.6700
                                             200.9500
                                                                36512465.0
31 2024-11-19 05:00:00
                         199.330
                                   205.3000
                                             198.7800
                                                        204.61
                                                                31197867.0
32 2024-11-20 05:00:00
                         202.980
                                   203.1300
                                                        202.88
                                             199.4500
                                                                32768989.0
33 2024-11-21 05:00:00
                         203.490
                                   203.4900
                                             195.7500
                                                        198.38
                                                                58800042.0
34 2024-11-22 05:00:00
                         198.250
                                   199.2599
                                             196.7500
                                                        197.12
                                                                31530844.0
35 2024-11-25 05:00:00
                         199.280
                                   201.9499
                                             199.0000
                                                        201.45
                                                                40685672.0
36 2024-11-26 05:00:00
                         201.900
                                   208.0000
                                             201.7900
                                                        207.86
                                                                41673737.0
37 2024-11-27 05:00:00
                         206.980
                                   207.6400
                                             205.0500
                                                        205.74
                                                                28061638.0
38 2024-11-29 05:00:00
                         205.830
                                   208.2000
                                             204.5900
                                                        207.89
                                                                24892447.0
39 2024-12-02 05:00:00
                         209.960
                                   212.9900
                                             209.5101
                                                        210.71
                                                                39523185.0
40 2024-12-03 05:00:00
                         210.310
                                   214.0200
                                             209.6500
                                                        213.44
                                                                32214828.0
41 2024-12-04 05:00:00
                         215.960
                                   220.0000
                                             215.7500
                                                        218.16
                                                                48745716.0
42 2024-12-05 05:00:00
                         218.030
                                   222.1500
                                             217.3000
                                                        220.55
                                                                41140220.0
43 2024-12-06 05:00:00
                         220.750
                                   227.1500
                                             220.6000
                                                        227.03
                                                                44178069.0
        vwap
              transactions
                              otc
0
    181.2782
                     520248
                             None
1
    182.3367
                     314225
                             None
```

2

3

184.5009

186.8877

345913

353745

None

None

```
4
                      342262
    188.8012
                              None
5
    188.1983
                     328273
                              None
6
                     433036
    186.8613
                              None
7
    186.6747
                     325887
                              None
8
    187.6646
                      327337
                              None
9
                      375969
    189.1225
                              None
10
    188.3148
                      329960
                              None
    189.6999
11
                      333875
                              None
12
    185.6853
                      402057
                              None
13
    186.1395
                      300448
                              None
14
    188.7107
                      357522
                              None
15
    188.9501
                      330722
                              None
                      371710
16
    190.3437
                              None
17
    193.4991
                      478472
                              None
18
    188.8446
                      836777
                              None
19
                     1003136
    198.8005
                              None
20
    196.0049
                      476483
                              None
21
    198.4642
                      372051
                              None
22
                     848126
    204.3931
                              None
23
    210.1282
                     610078
                              None
24
    208.6500
                      443816
                              None
25
    206.8887
                      424873
                              None
    208.0913
26
                      476724
                              None
27
                      529093
    212.8523
                              None
28
    212.3467
                      463284
                              None
29
    203.3135
                     968372
                              None
                      425696
30
    202.4554
                              None
31
    203.3052
                      383403
                              None
32
    201.7121
                      406917
                              None
33
    198.6947
                      736592
                              None
34
                     402719
    197.5866
                              None
35
    200.8436
                      427416
                              None
36
    206.2740
                      496396
                              None
    206.0978
                     350396
37
                              None
38
    206.7766
                     263735
                              None
39
    210.9654
                      461819
                              None
40
    212.6394
                      379348
                              None
41
    218.1624
                      553276
                              None
42
    220.1758
                      463440
                              None
    225.0548
43
                     524366
                              None
Combined data:
                                                            close
                                                                         volume
                    Date
                              open
                                         high
                                                      low
0
    2023-07-28 04:00:00
                           129.690
                                     133.0100
                                                129.3300
                                                           132.21
                                                                    46269781.0
    2023-07-31 04:00:00
1
                           133.200
                                     133.8700
                                                132.3800
                                                           133.68
                                                                    41901516.0
2
    2023-08-01 04:00:00
                           133.550
                                     133.6900
                                                131.6199
                                                           131.69
                                                                    42250989.0
                                     130.2300
                                                126.8200
3
    2023-08-02 04:00:00
                           130.154
                                                           128.21
                                                                    50988614.0
4
    2023-08-03 04:00:00
                           127.480
                                     129.8400
                                                126.4100
                                                           128.91
                                                                    90855736.0
. .
```

```
513 2025-08-14 04:00:00 227.400 233.1100 227.0200 230.98 61545824.0
514 2025-08-15 04:00:00 232.580 234.0800 229.8070 231.03 39649244.0
515 2025-08-18 04:00:00 230.225 231.9100 228.3300 231.49 25248890.0
516 2025-08-19 04:00:00 230.090 230.5283 227.1200 228.01 29891012.0
517 2025-08-20 04:00:00 227.120 227.2700 220.9150 223.81 36604319.0
        vwap transactions
0
    131.8837
                   413438 None
1
    133.3410
                  406644 None
                   385743 None
2
    132.2470
3
                  532942 None
    128.3973
4
    131.4941
                  746639 None
```

 513
 230.5020
 738785
 None

 514
 231.3857
 495351
 None

 515
 230.5791
 371228
 None

 516
 228.3423
 405021
 None

 517
 223.6745
 493752
 None

[518 rows x 9 columns]

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2024-12-05 00:00:00 thru 2025-02-03 00:00:00 for AMZN...

New data:

. .

		Date	open	high	low	close	volume	\
0	2024-12-05	05:00:00	218.030	222.1500	217.3000	220.55	41140220.0	
1	2024-12-06	05:00:00	220.750	227.1500	220.6000	227.03	44178069.0	
2	2024-12-09	05:00:00	227.210	230.0800	225.6700	226.09	46819363.0	
3	2024-12-10	05:00:00	226.090	229.0600	224.2002	225.04	31199864.0	
4	2024-12-11	05:00:00	226.410	231.2000	226.2600	230.26	35385785.0	
5	2024-12-12	05:00:00	229.830	231.0900	227.6300	228.97	28204084.0	
6	2024-12-13	05:00:00	228.400	230.2000	225.8608	227.46	28768080.0	
7	2024-12-16	05:00:00	230.230	233.0000	228.0100	232.93	37552096.0	
8	2024-12-17	05:00:00	232.390	232.7300	227.8500	231.15	35948131.0	
9	2024-12-18	05:00:00	230.770	231.3999	220.1100	220.52	43281443.0	
10	2024-12-19	05:00:00	224.910	226.0900	222.9200	223.29	39918739.0	
11	2024-12-20	05:00:00	219.840	226.2100	218.7300	224.92	88279184.0	
12	2024-12-23	05:00:00	225.010	226.8800	223.9000	225.06	28070007.0	
13	2024-12-24	05:00:00	226.940	229.1400	226.1300	229.05	15007497.0	
14	2024-12-26	05:00:00	228.500	228.5000	226.6706	227.05	16174500.0	
15	2024-12-27	05:00:00	225.600	226.0300	220.9000	223.75	27367147.0	
16	2024-12-30	05:00:00	220.060	222.9972	218.4300	221.30	28321240.0	
17	2024-12-31	05:00:00	222.965	223.2299	218.9400	219.39	24819655.0	
18	2025-01-02	05:00:00	222.030	225.1500	218.1900	220.22	33956579.0	
19	2025-01-03	05:00:00	222.505	225.3600	221.6200	224.19	27515606.0	
20	2025-01-06	05:00:00	226.780	228.8350	224.8400	227.61	31849831.0	

```
21 2025-01-07 05:00:00
                        227.900
                                 228.3810
                                                     222.11
                                           221.4600
                                                             28084164.0
22 2025-01-08 05:00:00
                        223.185
                                 223.5200
                                           220.2000
                                                     222.13
                                                             25033292.0
23 2025-01-10 05:00:00
                        221.460
                                 221.7100
                                           216.5000
                                                     218.94
                                                             36811525.0
24 2025-01-13 05:00:00
                        218.060
                                 219.4000
                                           216.4700
                                                     218.46
                                                             27262655.0
25 2025-01-14 05:00:00
                        220.440
                                 221.8200
                                           216.2000
                                                     217.76
                                                             24711650.0
26 2025-01-15 05:00:00
                        222.830
                                 223.5700
                                           220.7500
                                                     223.35
                                                             31291257.0
27 2025-01-16 05:00:00
                        224.420
                                 224.6500
                                           220.3100
                                                     220.66
                                                             24757276.0
28 2025-01-17 05:00:00
                        225.840
                                 226.5100
                                           223.0800
                                                     225.94
                                                             42370123.0
29 2025-01-21 05:00:00
                        228.900
                                 231.7800
                                                     230.71
                                           226.9400
                                                             39951456.0
30 2025-01-22 05:00:00
                        232.020
                                 235.4400
                                           231.1900
                                                     235.01
                                                             41448217.0
31 2025-01-23 05:00:00
                        234.100
                                 235.5200
                                                     235.42
                                           231.5100
                                                             26404364.0
32 2025-01-24 05:00:00
                        234.500
                                 236.4000
                                           232.9300
                                                     234.85
                                                             25890738.0
33 2025-01-27 05:00:00
                        226.210
                                                     235.42
                                 235.6100
                                           225.8600
                                                             49428332.0
34 2025-01-28 05:00:00
                        234.290
                                 241.7700
                                           233.9800
                                                     238.15
                                                             41587188.0
35 2025-01-29 05:00:00
                        239.015
                                 240.3900
                                           236.1500
                                                     237.07
                                                             26091716.0
                                                     234.64
36 2025-01-30 05:00:00
                        237.140
                                 237.9500
                                           232.2200
                                                             32020728.0
37 2025-01-31 05:00:00
                        236.500
                                 240.2900
                                           236.4100
                                                     237.68
                                                             36162377.0
38 2025-02-03 05:00:00 234.060
                                 239.2500
                                           232.9000
                                                     237.42 37285868.0
```

	vwap	transactions	otc
0	220.1758	463440	None
1	225.0548	524366	None
2	227.7060	572754	None
3	226.2639	417668	None
4	229.9009	427394	None
5	229.3395	342638	None
6	227.8553	362555	None
7	231.5484	430659	None
8	230.7897	433266	None
9	225.2441	529103	None
10	224.0262	466361	None
11	223.9497	456278	None
12	225.2708	321899	None
13	228.3619	203039	None
14	227.6146	262085	None
15	223.0146	381077	None
16	220.8850	371497	None
17	220.4005	308613	None
18	221.2745	449631	None
19	223.7050	346976	None
20	227.0921	410686	None
21	223.4033	379570	None
22	222.0414	325539	None
23	218.8640	493840	None
24	218.1426	373519	None
25	218.6245	332022	None
26	222.6690	353985	None
27	221.8942	313323	None

```
29
   230.0901
                    552447
                            None
30
   234.0950
                    512233
                            None
31
   234.2435
                    365153
                            None
32
   234.4587
                    349378
                            None
   231.8188
33
                    661486
                            None
34 238.6365
                    542344
                            None
35
   237.4141
                    384889
                            None
36 235.0230
                    428122 None
37
   238.2019
                    435388
                            None
38 236.6088
                    551855 None
Combined data:
                                                        close
                   Date
                            open
                                      high
                                                  low
                                                                   volume
0
    2023-07-28 04:00:00
                                                       132.21
                         129.690
                                  133.0100
                                            129.3300
                                                               46269781.0
1
    2023-07-31 04:00:00
                         133.200
                                  133.8700
                                             132.3800
                                                       133.68
                                                               41901516.0
                                                       131.69
2
    2023-08-01 04:00:00
                         133.550
                                  133.6900
                                             131.6199
                                                               42250989.0
3
    2023-08-02 04:00:00
                         130.154
                                  130.2300
                                             126.8200
                                                       128.21
                                                               50988614.0
4
    2023-08-03 04:00:00
                         127.480
                                  129.8400
                                             126.4100
                                                       128.91
                                                               90855736.0
513 2025-08-14 04:00:00
                         227.400
                                  233.1100
                                             227.0200
                                                       230.98
                                                               61545824.0
514 2025-08-15 04:00:00
                         232.580
                                  234.0800
                                             229.8070
                                                       231.03
                                                               39649244.0
515 2025-08-18 04:00:00
                         230.225
                                  231.9100
                                             228.3300
                                                       231.49
                                                               25248890.0
516 2025-08-19 04:00:00
                         230.090
                                  230.5283
                                             227.1200
                                                       228.01
                                                               29891012.0
517 2025-08-20 04:00:00
                         227.120
                                  227.2700
                                             220.9150 223.81
                                                               36604319.0
               transactions
                              otc
         vwap
0
     131.8837
                     413438 None
1
     133.3410
                     406644
                             None
2
     132.2470
                     385743
                             None
3
     128.3973
                     532942
                             None
4
     131.4941
                     746639
                             None
. .
513
    230.5020
                     738785
                             None
514
    231.3857
                     495351
                             None
515
    230.5791
                     371228 None
516
     228.3423
                     405021
                             None
517
     223.6745
                     493752
                             None
```

225.3927

28

385914

None

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2025-02-02 00:00:00 thru 2025-04-03 00:00:00 for AMZN...

New data:

```
high
                                               low
                                                     close
                                                                 volume \
                Date
                          open
2025-02-03 05:00:00
                      234.060
                                239.2500
                                          232.9000
                                                    237.42
                                                            37285868.0
2025-02-04 05:00:00
                      239.010
                                242.5200
                                          238.0300
                                                    242.06
                                                            29713812.0
```

```
2025-02-05 05:00:00
                         237.020
                                   238.3200
                                             235.2000
                                                        236.17
                                                                38832042.0
3
   2025-02-06 05:00:00
                         238.010
                                   239.6599
                                             236.0100
                                                        238.83
                                                                60897095.0
4
   2025-02-07 05:00:00
                         232.500
                                   234.8100
                                             228.0600
                                                        229.15
                                                                77539276.0
                         230.545
                                   233.9200
5
   2025-02-10 05:00:00
                                             229.2000
                                                        233.14
                                                                35419926.0
6
   2025-02-11 05:00:00
                         231.920
                                   233.4400
                                             230.1300
                                                        232.76
                                                                23713726.0
7
   2025-02-12 05:00:00
                         230.460
                                   231.1800
                                             228.1600
                                                        228.93
                                                                32285249.0
   2025-02-13 05:00:00
                         228.850
                                   230.4200
                                             227.5200
                                                        230.37
                                                                31346512.0
9
   2025-02-14 05:00:00
                         229.200
                                   229.8900
                                             227.2300
                                                        228.68
                                                                27031084.0
                                   229.3000
10 2025-02-18 05:00:00
                         228.820
                                             223.7200
                                                        226.65
                                                                42975133.0
11 2025-02-19 05:00:00
                         225.520
                                   226.8300
                                             223.7100
                                                        226.63
                                                                28566709.0
12 2025-02-20 05:00:00
                         224.775
                                   225.1300
                                                        222.88
                                             221.8100
                                                                30001665.0
13 2025-02-21 05:00:00
                         223.280
                                                        216.58
                                   223.3100
                                             214.7400
                                                                55323850.0
14 2025-02-24 05:00:00
                         217.450
                                   217.7150
                                             212.4200
                                                        212.71
                                                                42387585.0
15 2025-02-25 05:00:00
                         211.630
                                   213.3400
                                             204.1600
                                                        212.80
                                                                58957977.0
16 2025-02-26 05:00:00
                         214.940
                                   218.1600
                                             213.0900
                                                        214.35
                                                                39120603.0
17 2025-02-27 05:00:00
                         218.350
                                   219.9700
                                             208.3700
                                                        208.74
                                                                40548571.0
18 2025-02-28 05:00:00
                         208.650
                                   212.6200
                                             206.9900
                                                        212.28
                                                                51771737.0
19 2025-03-03 05:00:00
                         213.352
                                   214.0100
                                                        205.02
                                             202.5500
                                                                42948447.0
20 2025-03-04 05:00:00
                         200.110
                                   206.8000
                                             197.4320
                                                        203.80
                                                                60853084.0
21 2025-03-05 05:00:00
                         204.800
                                   209.9800
                                             203.2600
                                                        208.36
                                                                38610085.0
22 2025-03-06 05:00:00
                         204.400
                                   205.7700
                                             198.3015
                                                        200.70
                                                                49863755.0
23 2025-03-07 05:00:00
                         199.490
                                   202.2653
                                             192.5300
                                                        199.25
                                                                59802821.0
                                                        194.54
24 2025-03-10 04:00:00
                         195.600
                                   196.7300
                                             190.8500
                                                                62350926.0
25 2025-03-11 04:00:00
                         193.900
                                   200.1800
                                             193.4000
                                                        196.59
                                                                54002880.0
26 2025-03-12 04:00:00
                         200.720
                                   201.5200
                                             195.2900
                                                        198.89
                                                                43679284.0
27 2025-03-13 04:00:00
                         198.165
                                   198.8799
                                             191.8200
                                                        193.89
                                                                41270761.0
28 2025-03-14 04:00:00
                         197.410
                                   198.6500
                                             195.3200
                                                        197.95
                                                                38096663.0
29 2025-03-17 04:00:00
                         198.770
                                   199.0000
                                             194.3247
                                                        195.74
                                                                47341752.0
30 2025-03-18 04:00:00
                         192.520
                                   194.0000
                                             189.3800
                                                        192.82
                                                                40414867.0
31 2025-03-19 04:00:00
                         193.380
                                   195.9650
                                             191.9600
                                                        195.54
                                                                39442878.0
32 2025-03-20 04:00:00
                         193.070
                                   199.3200
                                                        194.95
                                             192.3000
                                                                38921113.0
33 2025-03-21 04:00:00
                         192.900
                                   196.9900
                                             192.5200
                                                        196.21
                                                                60056917.0
34 2025-03-24 04:00:00
                         200.000
                                   203.6400
                                             199.9500
                                                        203.26
                                                                41625365.0
35 2025-03-25 04:00:00
                         203.595
                                   206.2100
                                             203.2200
                                                        205.71
                                                                31171161.0
36 2025-03-26 04:00:00
                         205.835
                                   206.0100
                                             199.9250
                                                        201.13
                                                                32990973.0
37 2025-03-27 04:00:00
                         200.890
                                   203.7900
                                             199.2821
                                                        201.36
                                                                27317661.0
38 2025-03-28 04:00:00
                         198.420
                                   199.2600
                                             191.8810
                                                        192.72
                                                                52548226.0
39 2025-03-31 04:00:00
                         188.190
                                   191.3300
                                             184.4000
                                                        190.26
                                                                63547558.0
40 2025-04-01 04:00:00
                                   193.9300
                                                        192.17
                         187.860
                                             187.2000
                                                                41267315.0
41 2025-04-02 04:00:00
                         187.660
                                   198.3400
                                             187.6600
                                                        196.01
                                                                53679198.0
42 2025-04-03 04:00:00
                         182.995
                                   184.1300
                                             176.9200
                                                        178.41
                                                                95553617.0
              transactions
                              otc
        vwap
0
    236.6088
                     551855
                             None
```

1

2

3

4

241.1698

236.5720

235.7527

230.4527

412003

552144

803119

943441

None

None

None

None

```
232.4151
5
                      473182
                              None
6
    232.1101
                      329473
                              None
7
    229.6079
                      400325
                              None
8
    229.3312
                      408846
                              None
9
    228.6543
                      375369
                              None
    225.8082
10
                      600702
                               None
11
    225.3773
                      391423
                               None
12
    222.9351
                      447333
                              None
                      774966
13
    217.7122
                              None
14
    214.0526
                      586136
                              None
15
    209.6983
                      800750
                               None
16
    215.4418
                      508442
                              None
    212.3725
17
                      558788
                               None
18
    210.4030
                      540930
                               None
19
    207.4103
                      666781
                               None
    201.9283
                      872022
20
                              None
21
    207.0552
                      514659
                              None
22
    201.4563
                      688561
                              None
23
    197.6619
                      785672
                              None
24
    193.5839
                      902822
                              None
25
    196.8215
                      668549
                               None
26
    198.8820
                      573896
                               None
27
    194.3326
                      588538
                              None
                      470644
28
    197.4359
                              None
29
    196.4612
                      568556
                              None
30
    192.0851
                      554394
                              None
31
    194.2885
                      445698
                               None
32
    195.6360
                      455391
                               None
33
    195.3015
                      394836
                               None
34
    202.3699
                      515880
                               None
35
    205.1037
                      402368
                              None
36
    202.2164
                      450177
                               None
37
    201.8553
                      363321
                              None
38
    193.9820
                      678645
                              None
39
    188.2800
                      769862
                              None
40
    191.4704
                      528168
                               None
41
    194.2870
                      710850
                               None
    180.3426
                     1447903
                              None
Combined data:
                                                             close
                                                                         volume
                    Date
                               open
                                         high
                                                      low
0
    2023-07-28 04:00:00
                           129.690
                                     133.0100
                                                129.3300
                                                           132.21
                                                                    46269781.0
    2023-07-31 04:00:00
1
                           133.200
                                     133.8700
                                                132.3800
                                                           133.68
                                                                    41901516.0
2
    2023-08-01 04:00:00
                           133.550
                                     133.6900
                                                131.6199
                                                           131.69
                                                                    42250989.0
3
    2023-08-02 04:00:00
                           130.154
                                     130.2300
                                                126.8200
                                                           128.21
                                                                    50988614.0
4
    2023-08-03 04:00:00
                           127.480
                                     129.8400
                                                126.4100
                                                           128.91
                                                                    90855736.0
513 2025-08-14 04:00:00
                           227.400
                                     233.1100
                                                227.0200
                                                           230.98
                                                                    61545824.0
514 2025-08-15 04:00:00
                           232.580
                                     234.0800
                                                229.8070
                                                           231.03
                                                                    39649244.0
```

```
515 2025-08-18 04:00:00 230.225 231.9100 228.3300 231.49 25248890.0 516 2025-08-19 04:00:00 230.090 230.5283 227.1200 228.01 29891012.0 517 2025-08-20 04:00:00 227.120 227.2700 220.9150 223.81 36604319.0
```

	vwap	transactions	otc
0	131.8837	413438	None
1	133.3410	406644	None
2	132.2470	385743	None
3	128.3973	532942	None
4	131.4941	746639	None
	•••	•••	
513	230.5020	738785	None
514	231.3857	495351	None
515	230.5791	371228	None
516	228.3423	405021	None
517	223.6745	493752	None

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2025-04-02 00:00:00 thru 2025-06-01 00:00:00 for AMZN...

New data:

		Date	open	high	low	close	volume	\
0	2025-04-02	04:00:00	187.660	198.340000	187.6600	196.01	53679198.0	
1	2025-04-03	04:00:00	182.995	184.130000	176.9200	178.41	95553617.0	
2	2025-04-04	04:00:00	167.145	178.143600	166.0000	171.00	123159359.0	
3	2025-04-07	04:00:00	162.000	183.409900	161.3800	175.26	109327115.0	
4	2025-04-08	04:00:00	185.230	185.900000	168.5700	170.66	87710360.0	
5	2025-04-09	04:00:00	172.115	192.650000	169.9300	191.10	116804328.0	
6	2025-04-10	04:00:00	185.440	186.869200	175.8518	181.22	68302045.0	
7	2025-04-11	04:00:00	179.930	185.860000	178.0000	184.87	50594339.0	
8	2025-04-14	04:00:00	186.840	187.440000	179.2300	182.12	48002540.0	
9	2025-04-15	04:00:00	181.410	182.350000	177.9331	179.59	43641952.0	
10	2025-04-16	04:00:00	176.290	179.104600	171.4100	174.33	51875316.0	
11	2025-04-17	04:00:00	176.000	176.210000	172.0000	172.61	44726453.0	
12	2025-04-21	04:00:00	169.600	169.600000	165.2850	167.32	48126111.0	
13	2025-04-22	04:00:00	169.845	176.780000	169.3500	173.18	56607202.0	
14	2025-04-23	04:00:00	183.450	187.380000	180.1900	180.60	63470149.0	
15	2025-04-24	04:00:00	180.915	186.740000	180.1800	186.54	43763196.0	
16	2025-04-25	04:00:00	187.620	189.940000	185.4900	188.99	36414330.0	
17	2025-04-28	04:00:00	190.105	190.220000	184.8850	187.70	33224732.0	
18	2025-04-29	04:00:00	183.990	188.015800	183.6800	187.39	41667255.0	
19	2025-04-30	04:00:00	182.170	185.050000	178.8500	184.42	55176543.0	
20	2025-05-01	04:00:00	190.630	191.807112	187.5000	190.20	74265963.0	
21	2025-05-02	04:00:00	191.435	192.880000	186.4000	189.98	77903487.0	
22	2025-05-05	04:00:00	186.510	188.180000	185.5300	186.35	35217469.0	

```
23 2025-05-06 04:00:00 184.570
                                  187.930000
                                              183.8500
                                                        185.01
                                                                  29314055.0
24 2025-05-07 04:00:00
                        185.560
                                  190.990000
                                              185.0100
                                                        188.71
                                                                  44002926.0
25 2025-05-08 04:00:00
                        191.430
                                  194.330000
                                              188.8200
                                                        192.08
                                                                  41043620.0
26 2025-05-09 04:00:00
                                              191.1600
                        193.375
                                  194.690000
                                                         193.06
                                                                  29663143.0
27 2025-05-12 04:00:00
                        210.710
                                  211.660000
                                              205.7500
                                                         208.64
                                                                  75205042.0
28 2025-05-13 04:00:00
                        211.080
                                  214.840000
                                              210.1000
                                                         211.37
                                                                  56193682.0
29 2025-05-14 04:00:00
                        211.450
                                  211.930000
                                              208.8500
                                                         210.25
                                                                  38492128.0
30 2025-05-15 04:00:00
                        206.450
                                  206.880000
                                              202.6730
                                                         205.17
                                                                  64347317.0
31 2025-05-16 04:00:00
                        206.850
                                  206.850000
                                              204.3740
                                                         205.59
                                                                  43318478.0
32 2025-05-19 04:00:00
                        201.645
                                  206.620000
                                              201.2600
                                                         206.16
                                                                  34314810.0
33 2025-05-20 04:00:00
                        204.628
                                              202.6500
                                                                  29470373.0
                                  205.589900
                                                         204.07
                                                         201.12
34 2025-05-21 04:00:00
                        201.610
                                  203.455000
                                              200.0600
                                                                  42460924.0
35 2025-05-22 04:00:00
                         201.380
                                              200.1600
                                  205.760000
                                                         203.10
                                                                  38938882.0
36 2025-05-23 04:00:00
                         198.900
                                  202.370000
                                              197.8500
                                                         200.99
                                                                  33393545.0
37 2025-05-27 04:00:00
                         203.085
                                  206.690000
                                              202.1900
                                                         206.02
                                                                  34892044.0
38 2025-05-28 04:00:00
                        205.915
                                  207.660000
                                              204.4100
                                                         204.72
                                                                  28549753.0
39 2025-05-29 04:00:00
                        208.025
                                  208.810000
                                              204.2300
                                                         205.70
                                                                  34700005.0
                                  205.990000
                                              201.6950
40 2025-05-30 04:00:00
                        204.840
                                                         205.01
                                                                  51679406.0
```

	vwap	transactions	otc
0	194.2870	710850	None
1	180.3426	1447903	None
2	173.2162	1529094	None
3	172.6690	1420152	None
4	176.4128	1146023	None
5	182.3345	1310706	None
6	181.6510	925662	None
7	182.6453	638386	None
8	182.9501	656762	None
9	180.0701	564759	None
10	174.8524	685436	None
11	173.5808	527949	None
12	166.9255	726774	None
13	173.2470	617509	None
14	183.1208	732657	None
15	184.8801	516092	None
16	187.9963	489570	None
17	187.4701	452721	None
18	186.2911	507603	None
19	182.7658	688982	None
20	188.9767	890648	None
21	189.9300	920469	None
22	186.9373	458698	None
23	185.6619	371859	None
24	188.4964	499932	None
25	192.1266	513351	None
26	192.7564	362745	None
27	208.1558	920091	None

```
29 210.4614
                    519690
                            None
30 204.7892
                    821281
                            None
31
                    490987
   205.3336
                            None
32 205.3692
                    425652
                            None
33
   204.0108
                    417640
                            None
34 201.5235
                    569211
                            None
35
   203.3273
                    514617
                            None
                    483196 None
36 200.7891
37
   205.2156
                    505171
                            None
                            None
38 205.6978
                    407710
39 206.2943
                    496232
                            None
40 204.5318
                    493714
                            None
Combined data:
                                                 low
                   Date
                            open
                                      high
                                                        close
                                                                   volume
0
    2023-07-28 04:00:00
                         129.690
                                  133.0100
                                                      132.21
                                                               46269781.0
                                           129.3300
1
    2023-07-31 04:00:00
                         133.200
                                  133.8700
                                            132.3800
                                                      133.68
                                                               41901516.0
                                            131.6199
2
    2023-08-01 04:00:00
                         133.550
                                  133.6900
                                                      131.69
                                                               42250989.0
3
    2023-08-02 04:00:00
                         130.154
                                  130.2300
                                            126.8200
                                                      128.21
                                                               50988614.0
4
    2023-08-03 04:00:00
                         127.480
                                  129.8400
                                            126.4100
                                                       128.91
                                                               90855736.0
513 2025-08-14 04:00:00
                         227.400
                                  233.1100
                                            227.0200
                                                       230.98
                                                               61545824.0
514 2025-08-15 04:00:00
                         232.580
                                  234.0800
                                            229.8070
                                                      231.03
                                                               39649244.0
515 2025-08-18 04:00:00
                         230.225
                                  231.9100
                                            228.3300
                                                      231.49
                                                               25248890.0
516 2025-08-19 04:00:00
                         230.090
                                  230.5283
                                            227.1200
                                                      228.01
                                                               29891012.0
517 2025-08-20 04:00:00
                         227.120
                                  227.2700
                                            220.9150
                                                     223.81
                                                               36604319.0
         vwap
               transactions
                              otc
0
     131.8837
                     413438
                             None
1
     133.3410
                     406644
                             None
2
     132.2470
                     385743
                             None
3
     128.3973
                     532942
                             None
4
     131.4941
                     746639
                             None
. .
    230.5020
                     738785
513
                             None
514
    231.3857
                     495351
                             None
515
    230.5791
                     371228
                             None
516
     228.3423
                     405021
                             None
517
    223.6745
                     493752 None
```

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2025-05-31 00:00:00 thru 2025-07-30 00:00:00 for AMZN...

New data:

28 212.6792

743293

None

Date open high low close volume \

```
2025-06-02 04:00:00
                         204.980
                                   207.0000
                                                        206.65
                                             202.6800
                                                                  29113319.0
1
   2025-06-03 04:00:00
                         207.105
                                   208.9469
                                             205.0300
                                                        205.71
                                                                  33139121.0
2
   2025-06-04 04:00:00
                         206.550
                                   208.1800
                                                        207.23
                                             205.1800
                                                                  29915592.0
   2025-06-05 04:00:00
                                   212.8100
                                                        207.91
3
                         209.550
                                             207.5600
                                                                  51979243.0
4
   2025-06-06 04:00:00
                         212.400
                                   213.8699
                                             210.5000
                                                        213.57
                                                                  39832500.0
5
   2025-06-09 04:00:00
                         214.750
                                   217.8500
                                             212.8800
                                                        216.98
                                                                  38102502.0
6
   2025-06-10 04:00:00
                         216.780
                                   217.6900
                                             214.1500
                                                        217.61
                                                                  31303317.0
7
   2025-06-11 04:00:00
                         217.410
                                   218.4000
                                             212.8900
                                                        213.20
                                                                  39325981.0
8
   2025-06-12 04:00:00
                         211.780
                                   213.5800
                                             211.3300
                                                        213.24
                                                                  27639991.0
9
   2025-06-13 04:00:00
                         209.960
                                   214.0500
                                             209.6200
                                                        212.10
                                                                  29337763.0
10 2025-06-16 04:00:00
                         212.310
                                   217.0600
                                                        216.10
                                             211.6000
                                                                  33284158.0
11 2025-06-17 04:00:00
                         215.195
                                   217.4100
                                             214.5600
                                                        214.82
                                                                  32086262.0
12 2025-06-18 04:00:00
                         215.090
                                   217.9600
                                                        212.52
                                             212.3400
                                                                  44360509.0
13 2025-06-20 04:00:00
                         214.680
                                   214.8900
                                             208.2709
                                                        209.69
                                                                  75350733.0
14 2025-06-23 04:00:00
                         209.790
                                   210.3900
                                             207.3101
                                                        208.47
                                                                  37311725.0
15 2025-06-24 04:00:00
                         212.135
                                   214.3400
                                                        212.77
                                             211.0450
                                                                  38378757.0
16 2025-06-25 04:00:00
                         214.615
                                   216.0300
                                             211.1100
                                                        211.99
                                                                  31755698.0
17 2025-06-26 04:00:00
                         213.120
                                   218.0350
                                                        217.12
                                             212.0100
                                                                  50480814.0
18 2025-06-27 04:00:00
                         219.920
                                   223.3000
                                             216.7400
                                                        223.30
                                                                 119217138.0
19 2025-06-30 04:00:00
                         223.520
                                   223.8200
                                             219.1200
                                                        219.39
                                                                  58887780.0
20 2025-07-01 04:00:00
                         219.500
                                   221.8750
                                             217.9300
                                                        220.46
                                                                  39256830.0
21 2025-07-02 04:00:00
                         219.730
                                   221.6000
                                             219.0600
                                                        219.92
                                                                  30894178.0
22 2025-07-03 04:00:00
                         221.820
                                   224.0100
                                             221.3600
                                                        223.41
                                                                  29632353.0
                         223.000
23 2025-07-07 04:00:00
                                   224.2900
                                             222.3700
                                                        223.47
                                                                  36604139.0
24 2025-07-08 04:00:00
                         223.915
                                   224.0000
                                             218.4300
                                                        219.36
                                                                  45691987.0
                                                        222.54
25 2025-07-09 04:00:00
                         221.070
                                   224.2900
                                             220.4700
                                                                  38155121.0
26 2025-07-10 04:00:00
                         221.550
                                   222.7900
                                                        222.26
                                             219.7000
                                                                  30370591.0
27 2025-07-11 04:00:00
                         223.580
                                   226.6799
                                             222.3700
                                                        225.02
                                                                  50518307.0
                         225.070
28 2025-07-14 04:00:00
                                   226.6600
                                             224.2400
                                                        225.69
                                                                  35702597.0
29 2025-07-15 04:00:00
                         226.200
                                   227.2700
                                             225.4550
                                                        226.35
                                                                  34907294.0
30 2025-07-16 04:00:00
                                   226.1000
                                                        223.19
                         225.875
                                             222.1800
                                                                  39535926.0
31 2025-07-17 04:00:00
                         223.320
                                   224.5000
                                             222.5100
                                                        223.88
                                                                  31855831.0
                                                                  37833807.0
32 2025-07-18 04:00:00
                         225.140
                                   226.4000
                                             222.9800
                                                        226.13
33 2025-07-21 04:00:00
                         225.835
                                   229.6900
                                                        229.30
                                             225.6500
                                                                  40297556.0
34 2025-07-22 04:00:00
                         229.680
                                   230.0000
                                             226.3500
                                                        227.47
                                                                  37483702.0
35 2025-07-23 04:00:00
                         228.470
                                   228.7900
                                             227.0900
                                                        228.29
                                                                  28294852.0
36 2025-07-24 04:00:00
                         229.170
                                   236.0000
                                             228.6400
                                                        232.23
                                                                  42902266.0
37 2025-07-25 04:00:00
                         232.220
                                   232.4800
                                             231.1800
                                                        231.44
                                                                  28712095.0
38 2025-07-28 04:00:00
                                                        232.79
                         233.350
                                   234.2900
                                             232.2500
                                                                  26300138.0
39 2025-07-29 04:00:00
                         234.150
                                   234.7200
                                             230.3100
                                                        231.01
                                                                  33716220.0
40 2025-07-30 04:00:00
                                   231.8000
                         231.640
                                             229.2900
                                                        230.19
                                                                  32993273.0
              transactions
                              otc
        vwap
0
    205.5940
                     438892
                             None
    206.6343
                     436643
1
                             None
2
    206.8920
                     406881
                             None
3
    209.7551
                     668806
                             None
```

4

212.5672

512176

None

```
5
    216.0254
                     560148
                              None
6
    216.5561
                     429031
                              None
7
                     503640
    214.8840
                              None
8
    212.8655
                     364940
                              None
9
    211.9129
                     443361
                              None
10
    215.1622
                     457829
                              None
11
    215.7332
                     431316
                              None
12
    214.6135
                     475101
                              None
13
    210.6230
                     591675
                              None
14
    208.9130
                     513937
                              None
15
    213.1129
                     459901
                              None
    212.8066
16
                     417565
                              None
                     572822
17
    216.0944
                              None
18
    221.7267
                     750603
                              None
19
    220.6316
                     673189
                              None
20
    220.1508
                     544150
                              None
21
    220.2103
                     429633
                              None
22
    222.8867
                     364422
                              None
23
    223.4121
                     513469
                              None
24
    220.4836
                     615447
                              None
25
    222.4555
                     493756
                              None
26
    221.7055
                     451223
                              None
27
    224.8908
                     661385
                              None
28
    225.6173
                     460428
                              None
29
    226.4985
                     507705
                              None
30
    223.7872
                     556155
                              None
31
    223.6948
                     445580
                              None
32
    225.2906
                     454003
                              None
33
    228.3292
                     530328
                              None
34
    227.8662
                     475209
                              None
                     344504
35
    228.1765
                              None
36
    231.8022
                     526287
                              None
37
    231.7831
                     365765
                              None
38
    233.0997
                     394809
                              None
39
                     446598
    231.4830
                              None
40
    230.9240
                     445462
                              None
Combined data:
                    Date
                              open
                                         high
                                                     low
                                                            close
                                                                        volume
    2023-07-28 04:00:00
0
                           129.690
                                     133.0100
                                                129.3300
                                                           132.21
                                                                    46269781.0
1
    2023-07-31 04:00:00
                           133.200
                                     133.8700
                                                132.3800
                                                           133.68
                                                                    41901516.0
2
    2023-08-01 04:00:00
                           133.550
                                     133.6900
                                                131.6199
                                                           131.69
                                                                    42250989.0
3
                           130.154
    2023-08-02 04:00:00
                                     130.2300
                                                126.8200
                                                           128.21
                                                                    50988614.0
4
    2023-08-03 04:00:00
                           127.480
                                     129.8400
                                                126.4100
                                                           128.91
                                                                    90855736.0
513 2025-08-14 04:00:00
                           227.400
                                     233.1100
                                                227.0200
                                                           230.98
                                                                    61545824.0
514 2025-08-15 04:00:00
                           232.580
                                     234.0800
                                                229.8070
                                                           231.03
                                                                    39649244.0
515 2025-08-18 04:00:00
                           230.225
                                     231.9100
                                                228.3300
                                                           231.49
                                                                    25248890.0
516 2025-08-19 04:00:00
                           230.090
                                     230.5283
                                                227.1200
                                                           228.01
                                                                    29891012.0
```

	vwap	transactions	otc
0	131.8837	413438	None
1	133.3410	406644	None
2	132.2470	385743	None
3	128.3973	532942	None
4	131.4941	746639	None
	•••		
513	230.5020	738785	None
514	231.3857	495351	None
515	230.5791	371228	None
516	228.3423	405021	None
517	223.6745	493752	None

Sleeping for 12 seconds to avoid hitting API rate limits...

Pulling day data for 2025-07-29 00:00:00 thru 2025-09-27 00:00:00 for AMZN...

New data:

New data:								
		Date	open	high	low	close	volume	\
0	2025-07-29	04:00:00	234.150	234.7200	230.3100	231.01	33716220.0	
1	2025-07-30	04:00:00	231.640	231.8000	229.2900	230.19	32993273.0	
2	2025-07-31	04:00:00	235.770	236.5300	231.4000	234.11	104357263.0	
3	2025-08-01	04:00:00	217.210	220.4399	212.8000	214.75	122258801.0	
4	2025-08-04	04:00:00	217.400	217.4400	211.4200	211.65	77890146.0	
5	2025-08-05	04:00:00	213.050	216.3000	212.8700	213.75	51505121.0	
6	2025-08-06	04:00:00	214.695	222.6500	213.7409	222.31	54823045.0	
7	2025-08-07	04:00:00	221.000	226.2200	220.8200	223.13	40603513.0	
8	2025-08-08	04:00:00	223.140	223.8000	221.8836	222.69	32970477.0	
9	2025-08-11	04:00:00	221.780	223.0500	220.4000	221.30	31646222.0	
10	2025-08-12	04:00:00	222.230	223.5000	219.0500	221.47	37254707.0	
11	2025-08-13	04:00:00	222.000	224.9185	222.0000	224.56	36508335.0	
12	2025-08-14	04:00:00	227.400	233.1100	227.0200	230.98	61545824.0	
13	2025-08-15	04:00:00	232.580	234.0800	229.8070	231.03	39649244.0	
14	2025-08-18	04:00:00	230.225	231.9100	228.3300	231.49	25248890.0	
15	2025-08-19	04:00:00	230.090	230.5283	227.1200	228.01	29891012.0	
16	2025-08-20	04:00:00	227.120	227.2700	220.9150	223.81	36604319.0	

	vwap	transactions	otc
0	231.4830	446598	None
1	230.9240	445462	None
2	232.4106	1254660	None
3	216.2973	1742475	None
4	213.1312	1046525	None
5	214 5142	639055	None

```
553279
7
   223.1357
                           None
8
   222.6698
                   397504
                           None
9
   221.3865
                   441975
                           None
10 221.4124
                   472607
                           None
   223.9846
                   488194
11
                           None
12 230.5020
                   738785
                           None
13
   231.3857
                   495351
                           None
14 230.5791
                   371228 None
15 228.3423
                   405021
                           None
16 223.6745
                   493752 None
Combined data:
                                                       close
                   Date
                            open
                                     high
                                                 low
                                                                  volume \
0
    2023-07-28 04:00:00
                                                    132.21
                        129.690
                                 133.0100 129.3300
                                                              46269781.0
1
    2023-07-31 04:00:00
                        133.200
                                 133.8700
                                            132.3800 133.68
                                                              41901516.0
2
   2023-08-01 04:00:00
                        133.550 133.6900
                                            131.6199
                                                     131.69
                                                              42250989.0
3
    2023-08-02 04:00:00
                        130.154
                                 130.2300
                                            126.8200
                                                     128.21
                                                              50988614.0
4
   2023-08-03 04:00:00
                        127.480 129.8400 126.4100
                                                     128.91
                                                              90855736.0
                                                •••
513 2025-08-14 04:00:00
                        227.400
                                 233.1100
                                           227.0200
                                                     230.98
                                                              61545824.0
514 2025-08-15 04:00:00
                        232.580
                                                     231.03
                                 234.0800
                                            229.8070
                                                              39649244.0
                        230.225
515 2025-08-18 04:00:00
                                 231.9100
                                           228.3300
                                                     231.49
                                                              25248890.0
516 2025-08-19 04:00:00
                        230.090
                                 230.5283
                                           227.1200 228.01
                                                              29891012.0
517 2025-08-20 04:00:00
                        227.120
                                 227.2700
                                           220.9150 223.81
                                                              36604319.0
                              otc
         vwap
              transactions
0
    131.8837
                     413438 None
1
    133.3410
                     406644 None
2
     132.2470
                     385743
                            None
3
    128.3973
                     532942 None
4
    131.4941
                     746639
                            None
. .
                     •••
513
    230.5020
                     738785
                            None
514
    231.3857
                     495351 None
                     371228 None
515
    230.5791
516
    228.3423
                     405021
                            None
517
    223.6745
                    493752 None
```

219.4299

6

654274

None

Sleeping for 12 seconds to avoid hitting API rate limits...

Exporting AMZN day data to Excel...

Exporting AMZN day data to Pickle...

The first and last date of data for AMZN is:

Date open high low close volume vwap \ 0 2023-07-28 04:00:00 129.69 133.01 129.33 132.21 46269781.0 131.8837

```
transactions
                      otc
    0
             413438 None
                                                                 volume \
                      Date
                               open
                                      high
                                                low
                                                      close
    517 2025-08-20 04:00:00 227.12 227.27 220.915 223.81 36604319.0
             vwap transactions
                                  otc
    517 223.6745
                         493752 None
    Number of rows after data update: 518
    Number of rows added during update: 0
    Polygon data complete for AMZN day data.
[8]: # Copy this <!-- INSERT_polygon_pull_data_HERE --> to index_temp.md
    export_track_md_deps(dep_file=dep_file, md_filename="polygon_pull_data.md", __
```

Exported and tracked: polygon_pull_data.md

⇔content=df.to_markdown(floatfmt=".5f"))