

# data-pipelining-with-polygon

November 29, 2025

## 1 Data Pipelining With Polygon

### 1.1 Python Imports

```
[1]: # Standard Library
import datetime
import io
import os
import random
import sys
import time
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
      ↪None

# 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,
    existing_history_df=df,
    current_start=datetime(2025, 1, 1),
    free_tier=True,
```

```
    verbose=True,  
)  
)
```

Pulling day data for 2025-01-01 00:00:00 thru 2025-06-30 00:00:00 for AMZN...

New data:

```
          Date      open     high      low    close   volume \
0  2025-01-02 05:00:00  222.030  225.150  218.190  220.22  33956579.0
1  2025-01-03 05:00:00  222.505  225.360  221.620  224.19  27515606.0
2  2025-01-06 05:00:00  226.780  228.835  224.840  227.61  31849831.0
3  2025-01-07 05:00:00  227.900  228.381  221.460  222.11  28084164.0
4  2025-01-08 05:00:00  223.185  223.520  220.200  222.13  25033292.0
..
117 2025-06-24 04:00:00  212.135  214.340  211.045  212.77  38378757.0
118 2025-06-25 04:00:00  214.615  216.030  211.110  211.99  31755698.0
119 2025-06-26 04:00:00  213.120  218.035  212.010  217.12  50480814.0
120 2025-06-27 04:00:00  219.920  223.300  216.740  223.30  119217138.0
121 2025-06-30 04:00:00  223.520  223.820  219.120  219.39  58887780.0
```

```
      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
..
117 213.1129        459901  None
118 212.8066        417565  None
119 216.0944        572822  None
120 221.7267        750603  None
121 220.6316        673189  None
```

[122 rows x 9 columns]

Combined data:

```
          Date      open     high      low    close   volume \
0  2025-01-02 05:00:00  222.030  225.150  218.190  220.22  33956579.0
1  2025-01-03 05:00:00  222.505  225.360  221.620  224.19  27515606.0
2  2025-01-06 05:00:00  226.780  228.835  224.840  227.61  31849831.0
3  2025-01-07 05:00:00  227.900  228.381  221.460  222.11  28084164.0
4  2025-01-08 05:00:00  223.185  223.520  220.200  222.13  25033292.0
..
117 2025-06-24 04:00:00  212.135  214.340  211.045  212.77  38378757.0
118 2025-06-25 04:00:00  214.615  216.030  211.110  211.99  31755698.0
119 2025-06-26 04:00:00  213.120  218.035  212.010  217.12  50480814.0
120 2025-06-27 04:00:00  219.920  223.300  216.740  223.30  119217138.0
121 2025-06-30 04:00:00  223.520  223.820  219.120  219.39  58887780.0
```

	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
..	...	...	
117	213.1129	459901	None
118	212.8066	417565	None
119	216.0944	572822	None
120	221.7267	750603	None
121	220.6316	673189	None

[122 rows x 9 columns]

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

Pulling day data for 2025-06-29 04:00:00 thru 2025-12-26 04:00:00 for AMZN...

New data:

	Date	open	high	low	close	volume	\
0	2025-06-30 04:00:00	223.520	223.8200	219.12	219.39	58887780.0	
1	2025-07-01 04:00:00	219.500	221.8750	217.93	220.46	39256830.0	
2	2025-07-02 04:00:00	219.730	221.6000	219.06	219.92	30894178.0	
3	2025-07-03 04:00:00	221.820	224.0100	221.36	223.41	29632353.0	
4	2025-07-07 04:00:00	223.000	224.2900	222.37	223.47	36604139.0	
..	...	...	...	...	...	...	
94	2025-11-11 05:00:00	248.410	249.7499	247.23	249.10	23563960.0	
95	2025-11-12 05:00:00	250.235	250.3700	243.75	244.20	31190063.0	
96	2025-11-13 05:00:00	243.050	243.7500	236.50	237.58	41401638.0	
97	2025-11-14 05:00:00	235.060	238.7300	232.89	234.69	38956619.0	
98	2025-11-17 05:00:00	233.250	234.6000	229.19	232.87	59918908.0	

	vwap	transactions	otc
0	220.6316	673189	None
1	220.1508	544150	None
2	220.2103	429633	None
3	222.8867	364422	None
4	223.4121	513469	None
..	...	...	
94	248.6450	378251	None
95	245.5722	489440	None
96	239.2337	614028	None
97	235.7195	630487	None
98	231.8910	893852	None

[99 rows x 9 columns]

Combined 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
..
215 2025-11-11 05:00:00  248.410  249.7499  247.23  249.10  23563960.0
216 2025-11-12 05:00:00  250.235  250.3700  243.75  244.20  31190063.0
217 2025-11-13 05:00:00  243.050  243.7500  236.50  237.58  41401638.0
218 2025-11-14 05:00:00  235.060  238.7300  232.89  234.69  38956619.0
219 2025-11-17 05:00:00  233.250  234.6000  229.19  232.87  59918908.0

          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
..
215  248.6450        378251   None
216  245.5722        489440   None
217  239.2337        614028   None
218  235.7195        630487   None
219  231.8910        893852   None

```

[220 rows x 9 columns]

```
[6]: # Copy this <!-- INSERT_polygon_fetch_full_history_HERE --> to index_temp.md
export_track_md_deps(dep_file=dep_file, md_filename="polygon_fetch_full_history.
˓→md", content=df.to_markdown(floatfmt=".5f"))
```

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,
    )

time.sleep(12) # Sleep for 2 seconds to avoid hitting rate limits

```

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	
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	
..	..	..	..	..	..	..	
574	2025-11-10 05:00:00	248.340	251.7500	245.5900	248.40	36476474.0	
575	2025-11-11 05:00:00	248.410	249.7499	247.2300	249.10	23563960.0	
576	2025-11-12 05:00:00	250.235	250.3700	243.7500	244.20	31190063.0	
577	2025-11-13 05:00:00	243.050	243.7500	236.5000	237.58	41401638.0	
578	2025-11-14 05:00:00	235.060	238.7300	232.8900	234.69	38956619.0	

	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
..	..	.. ..	
574	248.3450	591047	None
575	248.6450	378251	None
576	245.5722	489440	None
577	239.2337	614028	None
578	235.7195	630487	None

[579 rows x 9 columns]

Last date in existing data: 2025-11-14 05:00:00

Number of rows in existing data: 579

Forcing check of existing data...

Pulling day data for 2023-11-18 00:00:00 thru 2024-05-16 00:00:00 for AMZN...

New data:

		Date	open	high	low	close	volume	\
0	2023-11-20	05:00:00	145.13	146.6300	144.725	146.13	41978766.0	
1	2023-11-21	05:00:00	143.91	144.0500	141.500	143.90	71225992.0	
2	2023-11-22	05:00:00	144.57	147.7400	144.570	146.71	45700002.0	
3	2023-11-24	05:00:00	146.70	147.2000	145.320	146.74	22378379.0	
4	2023-11-27	05:00:00	147.53	149.2600	146.880	147.73	53762428.0	
..	..	..	..	..	..	..	..	
118	2024-05-10	04:00:00	189.16	189.8920	186.930	187.48	34141771.0	
119	2024-05-13	04:00:00	188.00	188.3100	185.360	186.57	24898613.0	
120	2024-05-14	04:00:00	183.82	187.7200	183.450	187.07	38698155.0	
121	2024-05-15	04:00:00	185.97	186.7193	182.730	185.99	75459927.0	
122	2024-05-16	04:00:00	185.60	187.3100	183.460	183.63	38834450.0	

	vwap	transactions	otc
0	145.9368	380926	None
1	143.0430	566880	None
2	146.7929	428449	None
3	146.3718	217521	None
4	148.2873	465572	None
..	..	..	
118	188.0349	355996	None
119	186.4346	333255	None
120	185.9235	426722	None
121	184.7315	786217	None
122	185.1924	411940	None

[123 rows x 9 columns]

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	
..	..	..	..	..	..	..	
574	2025-11-10 05:00:00	248.340	251.7500	245.5900	248.40	36476474.0	
575	2025-11-11 05:00:00	248.410	249.7499	247.2300	249.10	23563960.0	
576	2025-11-12 05:00:00	250.235	250.3700	243.7500	244.20	31190063.0	
577	2025-11-13 05:00:00	243.050	243.7500	236.5000	237.58	41401638.0	
578	2025-11-14 05:00:00	235.060	238.7300	232.8900	234.69	38956619.0	

	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
..	..	..	

574	248.3450	591047	None
575	248.6450	378251	None
576	245.5722	489440	None
577	239.2337	614028	None
578	235.7195	630487	None

[579 rows x 9 columns]

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

Pulling day data for 2024-05-15 04:00:00 thru 2024-11-11 04:00:00 for AMZN...

New data:

	Date	open	high	low	close	volume	\
0	2024-05-15 04:00:00	185.97	186.7193	182.7300	185.99	75459927.0	
1	2024-05-16 04:00:00	185.60	187.3100	183.4600	183.63	38834450.0	
2	2024-05-17 04:00:00	183.76	185.3000	183.3500	184.70	33175655.0	
3	2024-05-20 04:00:00	184.34	186.6650	183.2800	183.54	30511768.0	
4	2024-05-21 04:00:00	182.30	183.2600	180.7500	183.15	50839129.0	
..	..	..	..	..	..	..	
119	2024-11-04 05:00:00	196.45	197.3300	194.3101	195.78	38492062.0	
120	2024-11-05 05:00:00	196.04	199.8200	195.9900	199.50	30564784.0	
121	2024-11-06 05:00:00	200.01	207.5500	199.1400	207.09	72292167.0	
122	2024-11-07 05:00:00	207.44	212.2500	207.1900	210.05	52878383.0	
123	2024-11-08 05:00:00	209.72	209.9633	207.4400	208.18	36075846.0	

	vwap	transactions	otc
0	184.7315	786217	None
1	185.1924	411940	None
2	184.5362	339447	None
3	184.4488	371996	None
4	181.8687	515624	None
..	..	..	
119	196.0049	476483	None
120	198.4642	372051	None
121	204.3931	848126	None
122	210.1282	610078	None
123	208.6500	443816	None

[124 rows x 9 columns]

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	
..	..	..	..	..	..	..	

574	2025-11-10	05:00:00	248.340	251.7500	245.5900	248.40	36476474.0
575	2025-11-11	05:00:00	248.410	249.7499	247.2300	249.10	23563960.0
576	2025-11-12	05:00:00	250.235	250.3700	243.7500	244.20	31190063.0
577	2025-11-13	05:00:00	243.050	243.7500	236.5000	237.58	41401638.0
578	2025-11-14	05:00:00	235.060	238.7300	232.8900	234.69	38956619.0

	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
..	..	.. ..	
574	248.3450	591047	None
575	248.6450	378251	None
576	245.5722	489440	None
577	239.2337	614028	None
578	235.7195	630487	None

[579 rows x 9 columns]

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

Pulling day data for 2024-11-07 05:00:00 thru 2025-05-06 05:00:00 for AMZN...

New data:

	Date	open	high	low	close	volume	\
0	2024-11-07 05:00:00	207.440	212.250000	207.19	210.05	52878383.0	
1	2024-11-08 05:00:00	209.720	209.963300	207.44	208.18	36075846.0	
2	2024-11-11 05:00:00	208.500	209.650000	205.59	206.84	35456012.0	
3	2024-11-12 05:00:00	208.370	209.540000	206.01	208.91	38942918.0	
4	2024-11-13 05:00:00	209.400	215.090000	209.14	214.10	46212943.0	
..	..	.. ..	.. ..	.. ..	.. ..		
117	2025-04-30 04:00:00	182.170	185.050000	178.85	184.42	55176543.0	
118	2025-05-01 04:00:00	190.630	191.807112	187.50	190.20	74265963.0	
119	2025-05-02 04:00:00	191.435	192.880000	186.40	189.98	77903487.0	
120	2025-05-05 04:00:00	186.510	188.180000	185.53	186.35	35217469.0	
121	2025-05-06 04:00:00	184.570	187.930000	183.85	185.01	29314055.0	

	vwap	transactions	otc
0	210.1282	610078	None
1	208.6500	443816	None
2	206.8887	424873	None
3	208.0913	476724	None
4	212.8523	529093	None
..	..	.. ..	
117	182.7658	688982	None
118	188.9767	890648	None

119	189.9300	920469	None
120	186.9373	458698	None
121	185.6619	371859	None

[122 rows x 9 columns]

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	
..	..	..	..	..	..	..	
574	2025-11-10 05:00:00	248.340	251.7500	245.5900	248.40	36476474.0	
575	2025-11-11 05:00:00	248.410	249.7499	247.2300	249.10	23563960.0	
576	2025-11-12 05:00:00	250.235	250.3700	243.7500	244.20	31190063.0	
577	2025-11-13 05:00:00	243.050	243.7500	236.5000	237.58	41401638.0	
578	2025-11-14 05:00:00	235.060	238.7300	232.8900	234.69	38956619.0	

	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
..	..	..	
574	248.3450	591047	None
575	248.6450	378251	None
576	245.5722	489440	None
577	239.2337	614028	None
578	235.7195	630487	None

[579 rows x 9 columns]

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

Pulling day data for 2025-05-05 04:00:00 thru 2025-11-01 04:00:00 for AMZN...

New data:

	Date	open	high	low	close	volume	\
0	2025-05-05 04:00:00	186.510	188.180	185.53	186.35	35217469.0	
1	2025-05-06 04:00:00	184.570	187.930	183.85	185.01	29314055.0	
2	2025-05-07 04:00:00	185.560	190.990	185.01	188.71	44002926.0	
3	2025-05-08 04:00:00	191.430	194.330	188.82	192.08	41043620.0	
4	2025-05-09 04:00:00	193.375	194.690	191.16	193.06	29663143.0	
..	..	..	..	..	..	..	
121	2025-10-27 04:00:00	227.660	228.400	225.54	226.97	38266995.0	
122	2025-10-28 04:00:00	228.215	231.485	226.21	229.25	47099924.0	

```

123 2025-10-29 04:00:00 231.672 232.820 227.76 230.30 52035936.0
124 2025-10-30 04:00:00 227.060 228.440 222.75 222.86 102252888.0
125 2025-10-31 04:00:00 250.100 250.500 243.98 244.22 166340683.0

```

	vwap	transactions	otc
0	186.9373	458698	None
1	185.6619	371859	None
2	188.4964	499932	None
3	192.1266	513351	None
4	192.7564	362745	None
..	..	.. ..	
121	227.2326	577811	None
122	228.8351	682226	None
123	230.0365	782147	None
124	231.3144	1399467	None
125	247.3912	1873179	None

[126 rows x 9 columns]

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	
..	.. ..	.. ..	.. ..	.. ..	.. ..	.. ..	
574	2025-11-10 05:00:00	248.340	251.7500	245.5900	248.40	36476474.0	
575	2025-11-11 05:00:00	248.410	249.7499	247.2300	249.10	23563960.0	
576	2025-11-12 05:00:00	250.235	250.3700	243.7500	244.20	31190063.0	
577	2025-11-13 05:00:00	243.050	243.7500	236.5000	237.58	41401638.0	
578	2025-11-14 05:00:00	235.060	238.7300	232.8900	234.69	38956619.0	

	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
..	.. ..	.. ..	
574	248.3450	591047	None
575	248.6450	378251	None
576	245.5722	489440	None
577	239.2337	614028	None
578	235.7195	630487	None

[579 rows x 9 columns]

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

Pulling day data for 2025-10-30 04:00:00 thru 2026-04-28 04:00:00 for AMZN...

New data:

	Date	open	high	low	close	volume	\
0	2025-10-30 04:00:00	227.060	228.4400	222.75	222.86	102252888.0	
1	2025-10-31 04:00:00	250.100	250.5000	243.98	244.22	166340683.0	
2	2025-11-03 05:00:00	255.360	258.6000	252.90	254.00	95997714.0	
3	2025-11-04 05:00:00	250.380	257.0100	248.66	249.32	51546311.0	
4	2025-11-05 05:00:00	249.030	251.0000	246.16	250.20	40610602.0	
5	2025-11-06 05:00:00	249.155	250.3800	242.17	243.04	46004201.0	
6	2025-11-07 05:00:00	242.900	244.9000	238.49	244.41	46374294.0	
7	2025-11-10 05:00:00	248.340	251.7500	245.59	248.40	36476474.0	
8	2025-11-11 05:00:00	248.410	249.7499	247.23	249.10	23563960.0	
9	2025-11-12 05:00:00	250.235	250.3700	243.75	244.20	31190063.0	
10	2025-11-13 05:00:00	243.050	243.7500	236.50	237.58	41401638.0	
11	2025-11-14 05:00:00	235.060	238.7300	232.89	234.69	38956619.0	
12	2025-11-17 05:00:00	233.250	234.6000	229.19	232.87	59918908.0	

	vwap	transactions	otc
0	231.3144	1399467	None
1	247.3912	1873179	None
2	255.4188	1284945	None
3	250.9671	777708	None
4	249.2607	598483	None
5	244.8242	697593	None
6	241.8493	667465	None
7	248.3450	591047	None
8	248.6450	378251	None
9	245.5722	489440	None
10	239.2337	614028	None
11	235.7195	630487	None
12	231.8910	893852	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	
..	...	...	...	...	...	...	
575	2025-11-11 05:00:00	248.410	249.7499	247.2300	249.10	23563960.0	
576	2025-11-12 05:00:00	250.235	250.3700	243.7500	244.20	31190063.0	
577	2025-11-13 05:00:00	243.050	243.7500	236.5000	237.58	41401638.0	
578	2025-11-14 05:00:00	235.060	238.7300	232.8900	234.69	38956619.0	
579	2025-11-17 05:00:00	233.250	234.6000	229.1900	232.87	59918908.0	

	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
..
575   ...          ...
576   248.6450      378251  None
577   245.5722      489440  None
578   239.2337      614028  None
579   235.7195      630487  None
579   231.8910      893852  None

```

[580 rows x 9 columns]

Exporting AMZN day data to Excel...

Exporting AMZN day data to Pickle...

The first and last date of day 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

	Date	open	high	low	close	volume	vwap	\
579	2025-11-17 05:00:00	233.25	234.6	229.19	232.87	59918908.0	231.891	

	transactions	otc
579	893852	None

Number of rows after data update: 580

Number of rows added during update: 1

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", ↴
content=df.to_markdown(floatfmt=".5f"))
```

Exported and tracked: polygon\_pull\_data.md