Downloading raw CSV Files from TOS

Raw data is downloaded from the Thinkorswim (TOS) scanner as 11 CSV files and stored in **Downloaded CSV Files** folder. Each file is named according to the sector (e.g., Technology.csv, Healthcare.csv).

Follow these steps to update raw data:

1. Log in to Thinkorswim → main window → Scan tab → Stock Hacker
2. Third ribbon:
   Scan in: All Listed Stock (in Category)
   Intersect with: By Industry → Choose an industry → Select All <industry>
   Exclude: All OTC Stocks
3. Use the following filters:
- Stock: Market cap, $M → min: 250M, no max value is specified
- Fundamental: Choose any fundamental metric, and leave min and max values empty. This step is done to make sure OTC stocks are excluded just in case sometimes the Exclude condition does not work properly.
4. Make sure required columns are set up in the right order:
   - Use the **Table Schema.xlsx** in the project folder to see the required columns.
   - Click the little settings wheel below the Scan button to customize columns.
5. Click Scan button on the right: It may take a while for data to fully load.
6. At the top right corner, under On Demand: click drop-down menu → Export → To file… → Navigate to **Downloaded CSV Files** folder → Replace the CSV file of the current industry

Download Position Statement

Before running the **exit_signals.py** script to scan for exit signals, download the position statement from TOS and save it in the **Position Statement** folder.

Running Python Scripts

1. Open the project folder terminal
2. Install all the required libraries (if not yet installed): Run pip install -r requirements.txt
3. To output stock screening result: Run py -m SCRIPTS.etl
4. To output exit signal detection result: Run py -m SCRIPTS.exit_signals
5. To output snapshots of selected stocks: Run py -m SCRIPTS.stock_snapshot

Output Folders of Python Scripts:

etl.py:

- **Results**\
- **Industry Means**\

exit_signals.py:

- **Exit Signals\Scannable**\
- **Exit Signals\Unscannable**\

stock_snapshot.py:

- **Selected Stock Snapshots**\

Using Power BI Dashboard

Follow the these steps when using the .pbix files for the first time:

1. Copy the path of the project folder
2. Open **Undervalued Stock Scanner.pbix** or **Exit Signals.pbix**
3. Home tab → Click Transform data drop-down → Edit parameters → Click on the FolderPath parameter → Paste the current folder path to replace the default folder path → Click OK
4. Click Apply changes in the popup

Refresh data when you open the dashboards after running Python scripts: Home tab → Click Refresh