Thanks for the full reset — here's a clear summary of where we are and what remains to complete the system that will guide your ETF trades around the late-June 2025 cycle:

**✅ Current Project Goal**

Build a system that:

1. **Accurately predicts the next USFR peak** (expected ~June 22–25).
2. **Signals the best day to buy the other 5 Treasury ETFs** (SGOV, BIL, TFLO, SHV, ICSH), which typically bottom on **July 1**.
3. **Determines how much and which ETFs to buy at each of those pivot points** (based on available cash and relative opportunity).
4. **Provides clear sell signals** for the 5 ETFs near **June 28–30** peak.
5. **Optionally rotates back into USFR**, post-peak, if it makes yield/price sense.

**✅ What’s Working Well**

**1. Core signal detection scripts:**

* \*\_post\_peak\_lows.py and \*\_post\_peak\_highs.py now detect most low/peak dates.
* usfr\_full\_cycles.py correctly captures USFR’s **late-month low to next-month peak** cycle.
* For SGOV, BIL, TFLO, SHV, ICSH, we’ve planned to centralize same-month low-to-peak logic in etf\_full\_cycles\_same\_month.py.

**2. GUI Framework (etf\_dashboard.py):**

* Toggles for each ETF and signal type (Low, Peak, or Both).
* Countdown logic and planned refresh capability.
* Directory structure is clean and well-modularized.

**🟡 Outstanding Issues and Tasks**

**🔶 1. USFR Peak Prediction for June 2025**

* **Problem:** While the full-cycle logic for USFR works, we need real-time **June peak detection** using:
  + Current price vs 10-day high
  + Reverse repo trends
  + ETF divergences (e.g. USFR up while others are flat/falling)
  + Calendar timing (target ~June 22–25)
  + Possibly macro clues (Fed, CPI, etc.)
* ✅ *Plan:*
  + Integrate and test a **peak signal scoring function** in usfr\_full\_cycles.py or a dedicated usfr\_peak\_signal.py that gives a probability signal.
  + GUI displays a live **"Peak Signal Strength"** or “Sell USFR now?” prompt.
  + Allow logging of daily signals to CSV for traceability.

**🔶 2. Buy Allocation Strategy After Selling USFR**

* **Problem:** After USFR peaks and is sold, how should proceeds be divided among the other 5 ETFs, including possibly rebuying some USFR after its post-peak drop?
* ✅ *Plan:*
  + Develop a **allocation\_recommender.py**:
    - Inputs: Current cash, recent price trends, historical avg gain from each ETF (low → peak), volume trends.
    - Outputs: Suggested % allocation to SGOV, BIL, TFLO, SHV, ICSH, and optionally USFR (if expected rebound is strong).
    - Integrate with GUI.

**🔶 3. Final Peak Signal Detection for the Other 5 ETFs (~June 28–30)**

* These ETFs usually peak **last trading day of the month**.
* But need script + GUI signal to confirm day-of:
  + Price near recent high
  + Volume surge
  + Any deviation from typical timing?
* ✅ *Plan:*
  + Confirm current \*\_post\_peak\_highs.py logic works for recent months.
  + Integrate real-time peak signal scoring logic in GUI.
  + Add CSV export of peak recommendations.

**🔶 4. Post-June 30 Low Signal for July 1**

* Confirm that your \*\_post\_peak\_lows.py files correctly flag low signals on **July 1** or surrounding days.
* ✅ *Plan:*
  + Make sure full-cycle low detection for July 1 is robust across all 5 ETFs.
  + Possibly build a july\_buy\_check.py script to score all 5 ETFs on July 1 and suggest the best buy basket.

**🔶 5. Final GUI Enhancements**

* ✅ “Refresh Data” button (already planned, not yet integrated).
* ✅ Time-stamped last refresh in UI.
* 🟡 Daily/weekly PDF or CSV performance report?
* 🟡 Cumulative profit tracker (% and $).
* 🟡 "Trade Suggestion Summary" screen.

**🧠 Optional Advanced Features (Post-core)**

* Multifactor regression to predict USFR peak probability.
* Dynamic scaling of ETF allocations based on confidence levels or macro data.
* Rolling performance dashboard showing monthly % yield from swings.

**🔚 Summary of Remaining Work (Prioritized)**

| **Priority** | **Task** | **File / Feature** |
| --- | --- | --- |
| 🔴 | Build/test usfr\_peak\_signal.py scoring system | analysis/ |
| 🔴 | Add live USFR peak alert to GUI | etf\_dashboard.py |
| 🔴 | Build allocation\_recommender.py for cash re-deployment post-USFR sale | analysis/ |
| 🔴 | Verify/repair \*\_post\_peak\_highs.py for SGOV, SHV, etc. | signals/ and analysis/ |
| 🟡 | Confirm July 1 low signals for all 5 ETFs | \*\_post\_peak\_lows.py |
| 🟡 | Finalize “Refresh” and date label in GUI | etf\_dashboard.py |
| 🟢 | Add CSV summary of all cycle moves with ROI% | full\_cycles\_\*.py |

Would you like to resume with:

* **USFR peak scoring logic and GUI alert**?
* Or **allocation recommender** post-sale?
* Or something else from the list above?

Let’s move step-by-step to make sure you're ready ahead of the June 22–25 window.