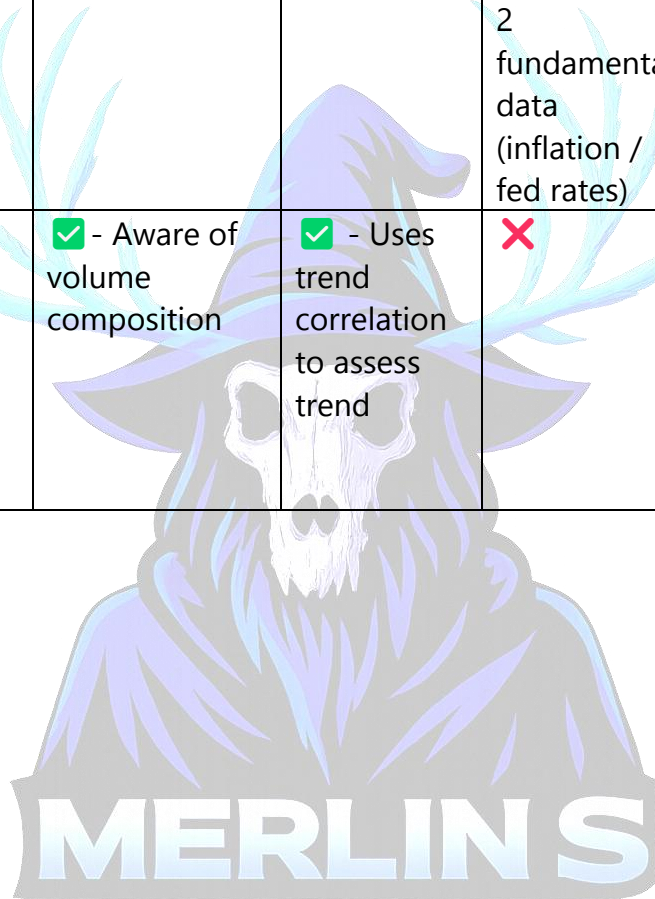


| Forecast Method             | Seasonal Awareness                  | Sector Awareness / Sector Rotation Aware | Volume Profile / Trends                                     | Trend Awareness                               | Macro - Economic Awareness                                                           | Market Cycles                                              | Technical Indicator Aware | Reasoning Strength             |
|-----------------------------|-------------------------------------|------------------------------------------|-------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------|--------------------------------|
| GraniSeason                 | ✓ Exact date, month, week awareness | ✗                                        | ✗                                                           | ✗                                             | ✗                                                                                    | ✓ - Seasonal Cycles                                        | ✗                         | Non-reasoning Model            |
| Astrologica                 | ✓ Exact date, month, week awareness | ✗                                        | ✗                                                           | ✗                                             | ✗                                                                                    | ✓ - Seasonal and Niche cycles (Moon phases and Retrograde) | ✗                         | Non-reasoning Model            |
| Fetcher                     | ✓ - Day awareness                   | ✗                                        | ✓ - Aware of volume profile and buyer vs seller composition | ✓ - Uses short term EMAs and regression slope | ✓ - Aware of 11 Macro-economic events and 2 fundamental data (inflation / fed rates) | ✗                                                          | ✓ - 8 total               | 5 – Moderate Reasoning Ability |
| Seasonal Forecast (Monthly) | ✓ - Exact month                     | ✗                                        | ✗                                                           | ✗                                             | ✗                                                                                    | ✓ - Seasonal Cycles                                        | ✗                         | Non-reasoning model            |

|                  |                                                            |                                                                                   |                                                                                                            |                                                                                                                                                 |                                                                                                                                                                             |                                                                                              |                                                                 |                              |
|------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------|
| Apollo           | <input checked="" type="checkbox"/> Day, Week, Month aware | <input checked="" type="checkbox"/> Aware of all sectors, including international | <input checked="" type="checkbox"/> Aware of volume profile, as well as volume composition of core sectors | <input checked="" type="checkbox"/> - Uses short and long term EMAs over entire history. Uses regression slope for immediate trend information. | <input checked="" type="checkbox"/> - Aware of 21 Macro-economic events and 6 fundamental data (GDP, CPI, Fed Rates, Bond Yields, US Domestic oil and Brent Oil, Inflation) | <input checked="" type="checkbox"/> - Seasonal and Niche cycles (Moon phases and Retrograde) | <input checked="" type="checkbox"/> - 28 total including pivots | 8 – Strong reasoning ability |
| Fetcher Ensemble | <input checked="" type="checkbox"/> - Day Awareness        | <input checked="" type="checkbox"/>                                               | <input checked="" type="checkbox"/> - Aware of volume profile and buyer vs seller composition              | <input checked="" type="checkbox"/> - Uses short term EMAs and regression slope                                                                 | <input checked="" type="checkbox"/> - Aware of 11 Macro-economic events and 2 fundamental data (inflation / fed rates)                                                      | <input checked="" type="checkbox"/>                                                          | <input checked="" type="checkbox"/> - 8 Total                   | 6 – Modest reasoning ability |

|             |                             |                                                          |                                                             |                                               |                                                                                      |                                                            |                             |                                             |
|-------------|-----------------------------|----------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------------|---------------------------------------------|
| Fetcher ETF | ✅ - Day Awareness           | ✅ - Aware of internal composite but broader sector blind | ✅ - Aware of volume profile and buyer vs seller composition | ✅ - Uses short term EMAs and regression slope | ✅ - Aware of 11 Macro-economic events and 2 fundamental data (inflation / fed rates) | ❌                                                          | ✅ - 8 Total                 | 6 – Modest reasoning ability                |
| Merlin LLM  | ✅ - Day and Month Awareness | ❌                                                        | ✅ - Aware of volume composition                             | ✅ - Uses trend correlation to assess trend    | ❌                                                                                    | ✅ - Seasonal and Niche cycles (Moon phases and Retrograde) | ✅ - Divergence and RSI only | 9 – Strong reasoning ability – Tensor model |



## Benchmarks

Benchmarking: Involves taking random samples at random intervals and evaluating its performance, while cutting off lookforward bias, and evaluating the accuracy of the model to predict Bias and Return. Samples done in 60 Day periods to assess responsiveness to market phases/cycles.

| Function & Target                                        | Directional Performance | Mean Absolute Error % for Returns (MAE) | Sample Size      | Parameters                |
|----------------------------------------------------------|-------------------------|-----------------------------------------|------------------|---------------------------|
| GraniSeasons for ETF (Benchmarking SPY)                  | 56%                     | 0.745                                   | 60               | 1-Minute timeframe, Daily |
| GraniSeasons for Ticker (Benchmarking MSFT)              | 51%                     | 1.29                                    | 60               | 1-Minute timeframe, Daily |
| Astrologica for ETF (Benchmarking SPY)                   | 49%                     | 1.13                                    | 60               | 1-Minute Timeframe, Daily |
| Astrologica for Ticker (Benchmarking MSFT)               | 44%                     | 1.57                                    | 60               | 1-Minute Timeframe, Daily |
| Seasonal Forecast Monthly for ETF (Benchmarking SPY)     | 51%                     | 0.98                                    | 4 (last 4 years) | Monthly Timeframe         |
| Seasonal Forecast Monthly for Ticker (Benchmarking MSFT) | 50%                     | 1.98                                    | 4 (last 4 years) | Monthly Timeframe         |
| Fetcher (base model) for ETF (Benchmarking SPY)          | 51%                     | 0.98                                    | 60               | 1-Minute Timeframe, Daily |
| Fetcher (base model) for Ticker (Benchmarking MSFT)      | 53%                     | 1.18                                    | 60               | 1-Minute Timeframe, Daily |
| Fetcher ETF (Benchmarking SPY)                           | 59%                     | 0.62                                    | 60               | 5-Minute Timeframe, Daily |

|                                              |     |      |    |                               |
|----------------------------------------------|-----|------|----|-------------------------------|
| Fetcher Ensemble<br>(Benchmarking MSFT)      | 54% | 1.08 | 60 | 5-Minute Timeframe,<br>Daily  |
| Apollo for ETF<br>(Benchmarking SPY)         | 68% | 0.48 | 60 | 30-Minute Timeframe,<br>Daily |
| Apollo for Ticker<br>(Benchmarking GOOG)     | 61% | 0.98 | 60 | 30-Minute Timeframe,<br>Daily |
| Merlin LLM for ETF<br>(Benchmarking SPY)     | 57% | NA   | 60 | Daily Timeframe               |
| Merlin LLM for Ticker<br>(Benchmarking MSFT) | 56% | NA   | 60 | Daily Timeframe               |

