

## C.4 Decision Agent

To implement the DecisionAgent, we design a prompt that compels the DecisionAgent to integrate signals from all specialized agents into coherent trading actions, balancing profitability, risk, and interpretability in high-frequency market settings.

### Prompt

You are a high-frequency quantitative trading (HFT) analyst reviewing the current `{{time_frame}}` K-line chart for `{{stock_name}}`.

Issue an immediate execution order: LONG or SHORT. (HOLD is prohibited.)

Forecast horizon. Predict price direction for the next 3 candlesticks (e.g. 15-min chart → next 45 minutes; 4-hour chart → next 12 hours).

Here is a LaTeX-style refactored version of your original decision guideline, following the concise structure and tone you provided:

—  
Base your decision on three reports:

1. Technical Indicator Report — Evaluate momentum (MACD, ROC) and oscillators (RSI, Stochastic, Williams %R). Prioritize strong signals (e.g., MACD cross, RSI divergence, extreme levels). Down-weight mixed or neutral indicators unless aligned across types.
2. Pattern Report — Act only on clearly formed bullish/bearish patterns with breakout or breakdown confirmation (e.g., strong wick, volume spike, engulfing). Ignore early-stage or consolidating setups without support from other reports.
3. Trend Report — Analyze price interaction with trendlines: Up-sloping support = buying interest; down-sloping resistance = selling pressure. For compression zones, act only with clear candle or indicator confluence. Do not assume breakout direction from geometry alone.

Decision Strategy:

- Act only on confirmed, aligned signals across all three reports.
- Favour strong momentum and decisive price action (e.g., MACD crossover, rejection wick, breakout candle).
- If reports conflict, choose the side with stronger, more recent confirmation.
- In consolidation or unclear setups, defer to dominant trendline slope (e.g., short in descending channel).
- Do not speculate — choose the more defensible side.
- Suggest a risk-reward ratio between 1.2 and 1.8, adjusting for volatility and trend strength.

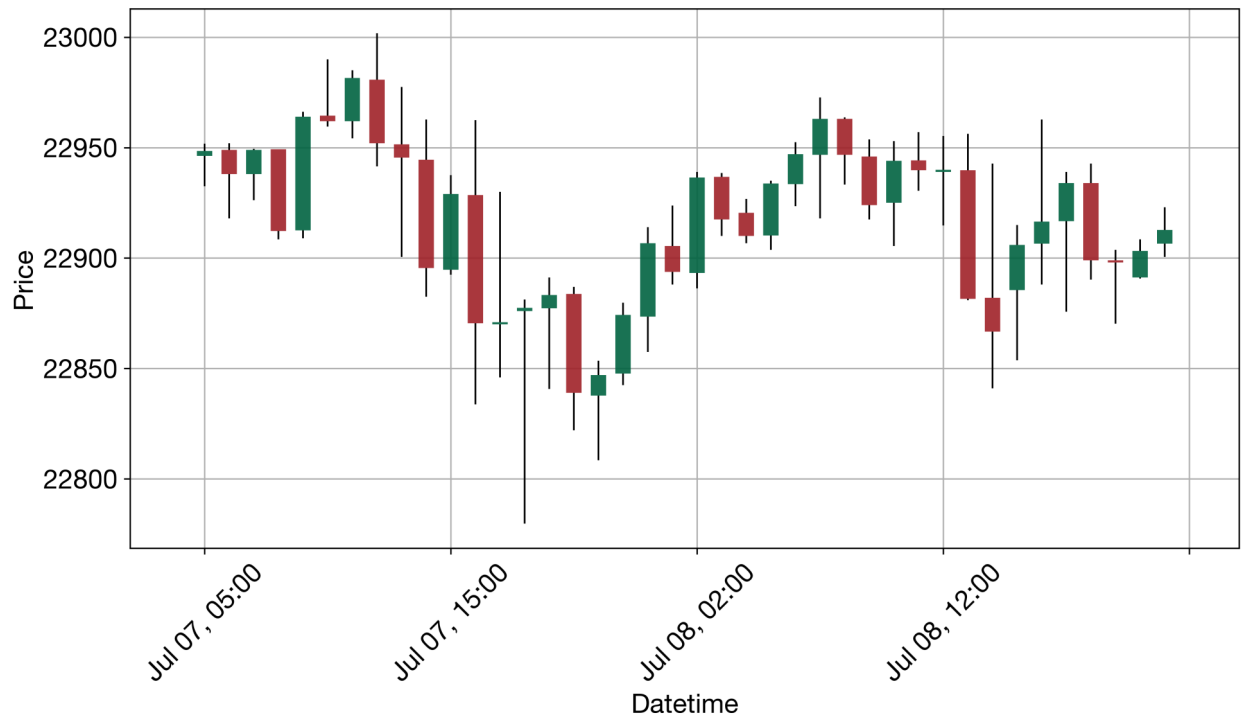
—  
Let me know if you want this formatted directly in LaTeX code or exported to PDF.

Output JSON:

```
{
  "forecast_horizon" : "Predicting next N candlesticks (specify)",
  "decision"         : "<LONG or SHORT>",
  "justification"     : "<Concise confirmed reasoning>",
  "risk_reward_ratio": "<1.2 - 1.8>"
}
```

**Prompt for DecisionAgent in our multi-agent LLM framework.** The agent integrates three upstream perspectives, indicator signals, structural patterns, and trend interactions, and outputs a short-term directional decision (LONG or SHORT). The prompt instructs the agent to prioritize consistent evidence, avoid speculative outputs, and provide structured justification, including an estimated risk–reward ratio.

## C.5 Pattern Tool Sample Output



**Figure 7 Tool-generated chart for PatternAgent on NQ (2025).** Raw intraday candlesticks from the July 7–8 window are shown prior to overlaying reference lines. The sequence of lower highs and higher lows indicates a contracting trading range, suggesting latent pressure that often precedes a breakout once a boundary is breached.

## C.6 Trend Tool Sample Output



**Figure 8 Tool-generated chart for TrendAgent on NQ (2025).** Intraday candlesticks compress between an upward-sloping support line (blue) and a downward-sloping resistance line (red), forming a symmetrical-triangle wedge. The converging boundaries indicate a consolidation phase where buying pressure gradually builds while sellers cap rallies, often preceding a decisive breakout once a boundary is breached.