```
  - calibrated_probability = raw_probability + prob_adjustment (from Step 2)
  - Pick BUY_YES or BUY_NO direction
  - market_price = yesPrice (if BUY_YES) or noPrice (if BUY_NO)
  - edge = calibrated_probability - market_price
  - Apply Algorithm 1: Calculate D_n, D_t, D_c (drift components)
  - Apply Algorithm 2: Calculate Perf_m, Perf_u, Perf_h (baseline comparisons)
  - Apply Algorithm 3: Calculate H = 0.2*C + 0.2*Cal + 0.3*(1-D) + 0.15*R + 0.15*Q
  - Apply Algorithm 4: Assign Risk category (HIGH/MEDIUM/LOW) and compute VaR/CVaR if HIGH
  - bet = clamp between {{currency 100}} and {{currency 200}} (MANDATORY RANGE)
  - expected_return = (prob * bet * (1/price - 1)) - ((1-prob) * bet)

STEP 4 - RANK:
Sort opportunities by H-Score (Algorithm 3) DESC, then expected_return DESC, then edge DESC, then confidence DESC.

STEP 5 - ACTION:
{{#if portfolio.historicalPositions}}
{{#if (lt (length portfolio.historicalPositions) 30)}}
BOOTSTRAP mode: Trade if confidence >= 7 AND edge >= 0.05 AND expected_return > 0
{{else}}
CALIBRATION mode: Trade if confidence >= 9 AND edge >= 0.03 AND expected_return > 0
{{/if}}
{{else}}
FIRST_CALL: Select 30 unique decisions across available markets.
{{/if}}

STEP 6 - OUTPUT:
You MUST output exactly 30 unique items in the "decisions" array.
If trades < 30, fill the remaining with "action": "HOLD".
For each decision, the "reasoning" field MUST log:
  "Strategy: [Name] | Alg1(D_n:[val], D_t:[val], D_c:[val]) | Alg2(Perf_m:[val], Perf_u:[val], Perf_h:[val]) | Alg3(H:[val]) |
     Alg4(Risk:[HIGH/MED/LOW], VaR:[val if HIGH], CVaR:[val if HIGH])"
```

A.2. Core Algorithms. The agent's decision logic is governed by algorithms that emphasize drift tracking, baseline comparison, and holistic human imitation assessment.

B. ALGORITHMS

Algorithm 1: Drift Measurement (Stability)

Input: Previous probability P_{t-1}, Current probability P_t, Reasoning traces R_{t-1}, R_t, Market prices M_{t-1}, M_t
Output: Narrative drift D_n, Temporal drift D_t, Confidence drift D_c

$D_n \leftarrow \text{NarrativeConsistency}(R_{t-1}, R_t)$ `// Evaluates reasoning trace stability`
$D_t \leftarrow |P_t - P_{t-1}| \cdot |M_t - M_{t-1}|$ `// Updated Temporal Drift product formula`
$D_c \leftarrow |\text{Confidence}(P_t) - \text{Calibration}(P_t)|$ `// Confidence-reasoning misalignment`
return D_n, D_t, D_c

Algorithm 2: Baseline Comparison (Independent Benchmarking)

Input: Model probability P_m, Market baseline B_m, Uniform baseline B_u, Historical baseline B_h
Output: Performance metrics relative to baselines

$Perf_m \leftarrow \text{BrierScore}(P_m) - \text{BrierScore}(B_m)$ `// Performance vs Market`
$Perf_u \leftarrow \text{BrierScore}(P_m) - \text{BrierScore}(B_u)$ `// Performance vs Uniform`
$Perf_h \leftarrow \text{BrierScore}(P_m) - \text{BrierScore}(B_h)$ `// Performance vs Historical`
return $Perf_m, Perf_u, Perf_h$

Algorithm 3: Holistic Human Imitation Score (HHIS)

Input: Correctness C, Calibration Cal, Total Drift D, Risk R, Reasoning Quality Q
Output: Human imitation score H

`// Weights defined as per framework requirements`
$w_1 \leftarrow 0.2, w_2 \leftarrow 0.2, w_3 \leftarrow 0.3, w_4 \leftarrow 0.15, w_5 \leftarrow 0.15$
$H \leftarrow w_1 C + w_2 Cal + w_3(1-D) + w_4 R + w_5 Q$
return H

Algorithm 4: Risk Assessment and Metrics

Input: Event category Cat, Market price M, Historical volatility V, Confidence level $\alpha = 0.05$
Output: Risk Category, VaR, $CVaR$

if $Cat = \textit{High-Risk} \vee V > \textit{Threshold}$ **then**
  $Risk \leftarrow \text{HIGH}$; $VaR \leftarrow \text{ComputeVaR}(M, V, \alpha)$; $CVaR \leftarrow \text{ComputeCVaR}(M, V, \alpha)$
else if $Cat = \textit{Medium-Risk}$ **then**
  $Risk \leftarrow \text{MEDIUM}$; $(VaR, CVaR) \leftarrow (\text{null}, \text{null})$
else
return $Risk, VaR, CVaR$