

System Architecture & Agents Planning

Planning Agent Roles

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Why are Planning Agent Roles Important?



Clarity of Responsibilities

Avoids overlapping logic between agents



Improves Reliability

Reduces hallucination & tool misuse by enforcing role-specific constraints



Modular Debugging

Easier to test, update, or replace individual agents

Why are Planning Agent Roles Important?



Performance Optimization

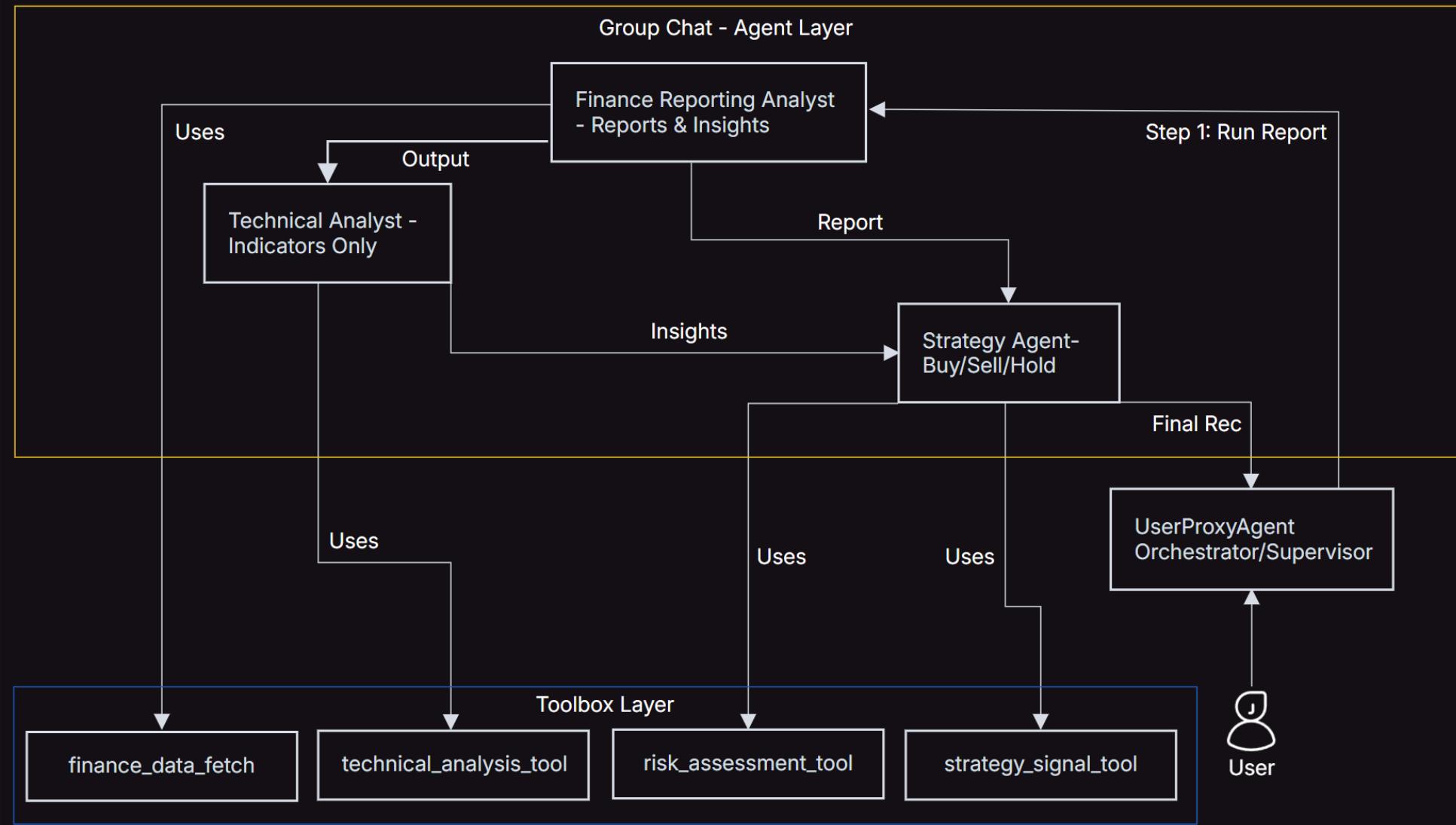
Streamlined interactions reduce LLM calls
and cost



Better Evaluation

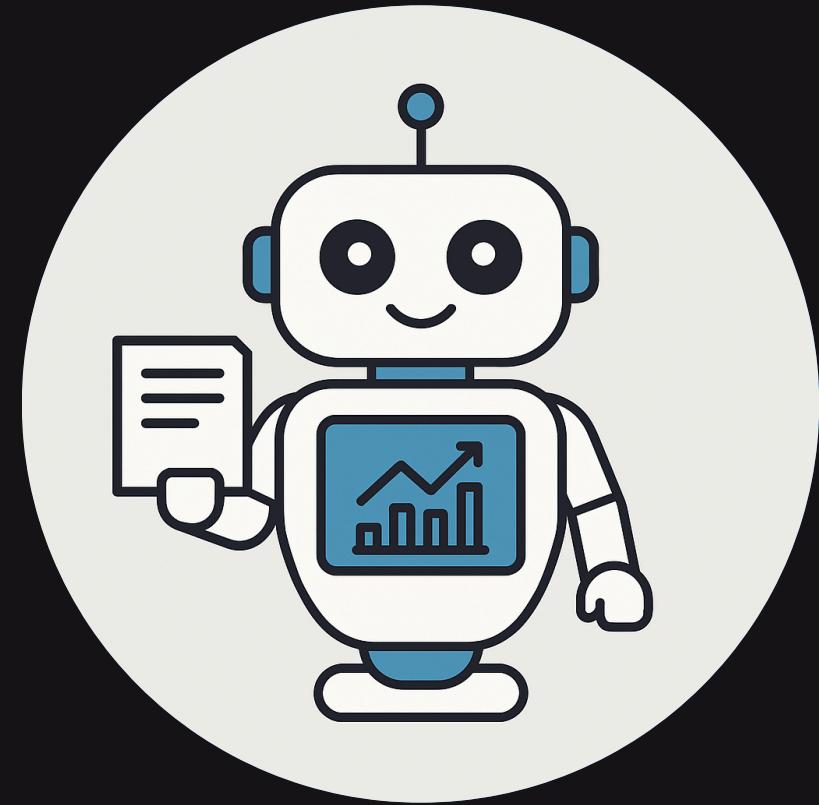
Enables targeted evaluation of agent
decisions and outputs

Agents and Tools for Financial Analysis



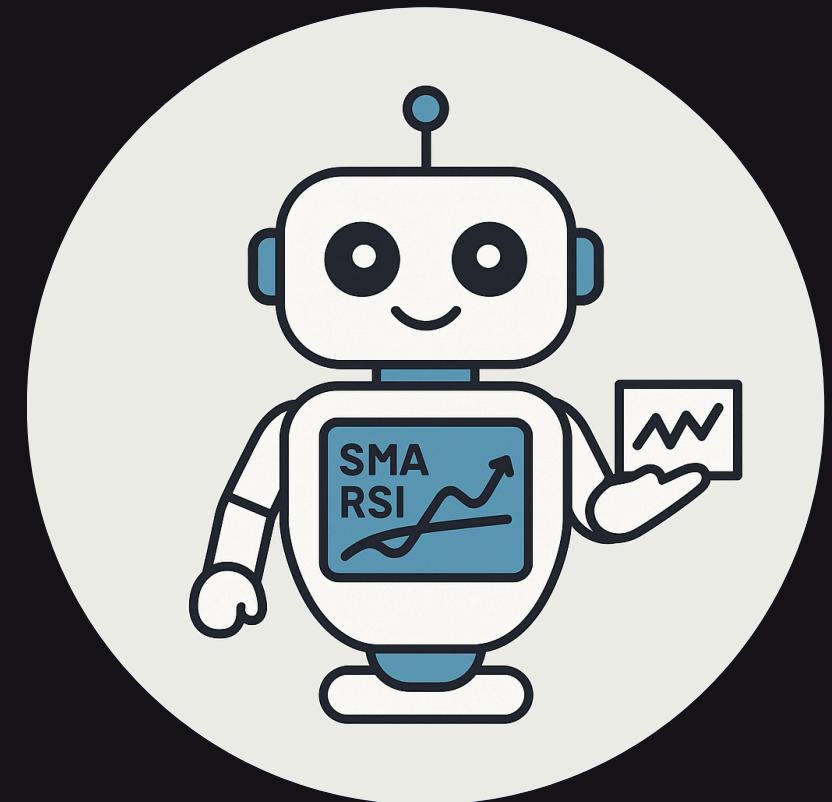
Agent 1 – Finance Reporting Analyst

- **Role**
 - Generate markdown-based financial reports from stock data
- **Responsibilities**
 - Fetch data via tools
 - Compute financial metrics, ratios
 - Create initial analysis report in a markdown format
- **Constraints**
 - No hallucinations, must reflect uncertainty
- **Tool Used**
 - `finance_data_fetch`



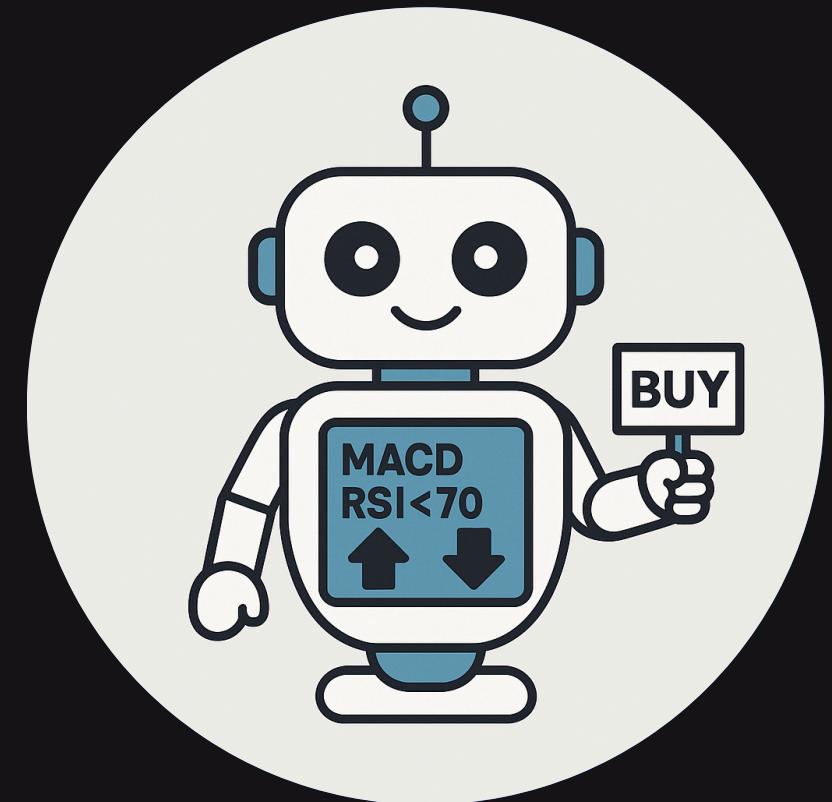
Agent 2 – Technical Analyst

- **Role**
 - Perform technical analysis using predefined indicators
- **Responsibilities**
 - Analyze SMA, EMA, RSI, Last Close Price
 - Identify trends, patterns, and trading signals
- **Constraints**
 - No summaries or financial reports
 - Does not handle performance overview
 - No direct human input handling
- **Tool Used**
 - `technical_analysis_tool`



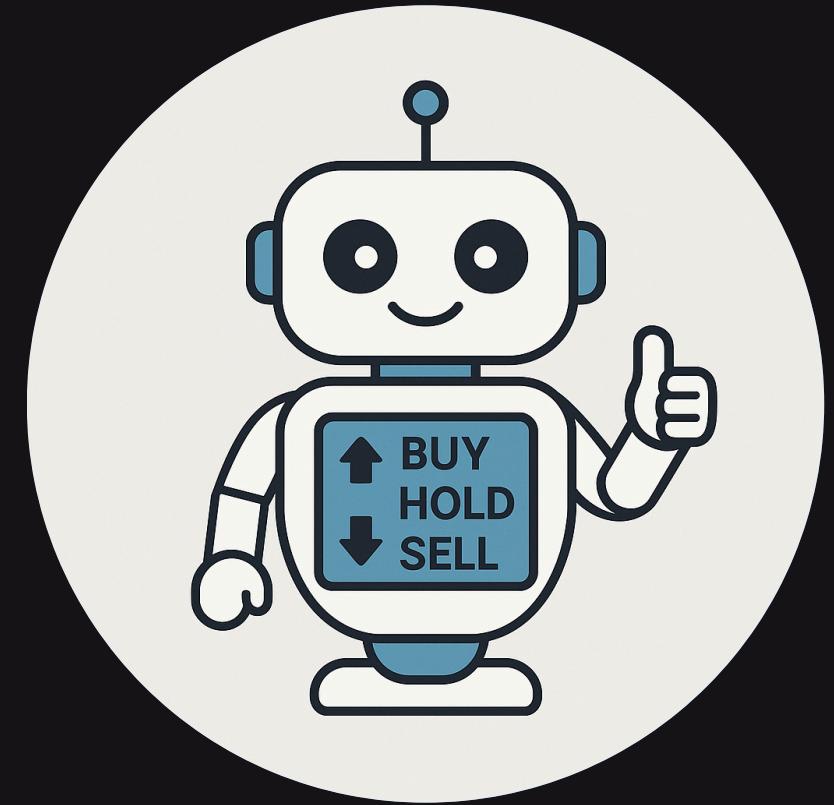
Agent 3 – Strategy Agent

- Role
 - Recommend Buy/Sell/Hold actions and assess risk
- Responsibilities
 - Analyze trading signals: MACD, RSI, Last Close
 - Evaluate risk: Volatility, Beta, Dividend Yield
 - Provide rationale behind recommendation
- Decision Logic
 - Buy if $\text{MACD} > \text{Signal}$ and $\text{RSI} < 70$
 - Sell if $\text{MACD} < \text{Signal}$ or $\text{RSI} > 70$
 - Hold if indicators are conflicting
- Tool Used
 - `risk_assessment_tool`, `strategy_signal_tool`



Agent 4 – Orchestrator (UserProxyAgent)

- **Role**
 - Coordinates the overall workflow
- **Responsibilities**
 - Initiates the reporting agent for data and analysis
 - Passes output to reporting agent and technical analyst
 - Invokes strategy agent with combined inputs
 - Presents a final summary to the user
- **Rules**
 - Do not invent information
 - Use only available tools and agent outputs
 - Handle failures gracefully



Overall Architecture Summary

Agent	Focus	Unique Capability	Tool Used	Acts On
1	Financial report generation	Markdown reports, ratios	finance_data_fetch	Stock data
2	Technical analysis	SMA/EMA/RSI trend signals	technical_analysis_tool	Historical price
3	Strategy recommendation	Combines signals & risk	risk_assessment_tool, strategy_signal_tool	Signals & metrics
4	Orchestrator	Acts on behalf of user	risk_assessment_tool, strategy_signal_tool	Coordinates responses

Thanks