

Uptiq Agents

1. Investment Recommendations Agent

Description :

The system is an AI-powered investment assistant designed to provide personalized investment insights and market analysis through multiple specialized sub-agents. It follows an intent-based architecture where each sub-agent focuses on a specific task or analytical capability. The sub-agents are linked to corresponding intents that define their purpose and workflows that handle the execution of tasks.

List of Sub-Agents and Their Functions:

1.1. Investment Recommendations Agent

- **Intent:** Recommend Investments
- **Workflow:** Provides personalized investment suggestions based on user preferences and financial goals.

1.2. Sentiment Analysis Agent

- **Intent:** Analyze Market Sentiment
- **Workflow:** Analyzes sentiment from news, social media, and market trends to gauge overall market mood.

1.3. News Summarization Agent

- **Intent:** Summarize Financial News
- **Workflow:** Summarizes key financial news and updates to help users stay informed.

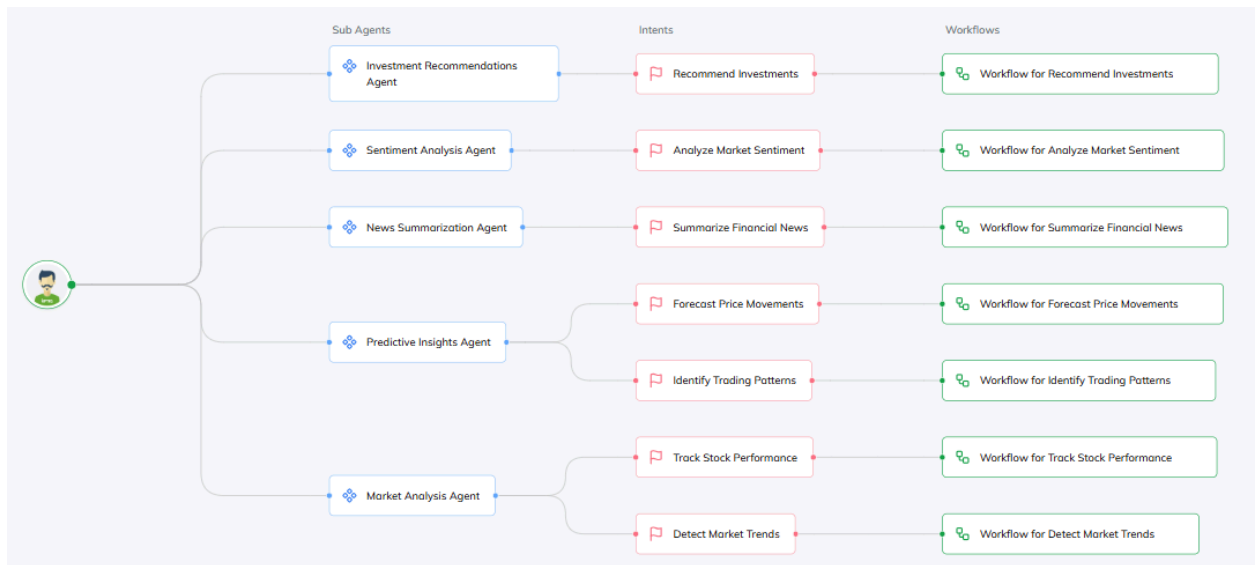
1.4. Predictive Insights Agent

- **Intents:** Forecast Price Movements: Predicts potential price changes of stocks or assets. Identify Trading Patterns: Detects common trading patterns and anomalies.
- **Workflows:** Workflow for Forecast Price Movements. Workflow for Identify Trading Patterns

1.5. Market Analysis Agent

- **Intents:** Track Stock Performance: Monitors and tracks the performance of specific stocks. Detect Market Trends: Identifies emerging market trends and patterns.
- **Workflows:** Workflow for Track Stock Performance. Workflow for Detect Market Trends

Implementation :



Overview of Investment Recommendations Agent

Stock Market Insights AI Debug Mode ⌵

Please paste the financial news you want summarized.

Apple Inc. reported its quarterly earnings today, beating Wall Street expectations. Revenue rose by 6% year-over-year, driven by strong iPhone 15 sales and increased service subscriptions. CEO Tim Cook mentioned expansion in India and upcoming investments in AI. However, Mac sales declined slightly due to supply chain adjustments.

Here's the summarized news update:
{{prompt_output}} Apple Inc. has released its quarterly earnings report, which exceeded Wall Street's predictions. The company's revenues grew by 6% compared to the same period last year, which was primarily driven by robust iPhone 15 sales and an uptick in service subscriptions. CEO Tim Cook indicated plans to expand in the Indian market and make significant investments in Artificial Intelligence (AI). However, the company's Mac sales saw a minor dip due to adjustments in the supply chain.
Potential Market Impact:
Apple's better-than-expected earnings report could positively affect its stock price. The strong performance of iPhone 15 and a rise in service subscriptions may increase investor confidence. Apple's plans to expand in India could potentially open up a substantial new market, offering further growth opportunities. However, the decrease in Mac sales due to supply chain concerns might raise some concerns among investors. The announced investments in AI signal Apple's commitment to

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News Summarization Agent Answer

Can you suggest some good investments based on my goals?

To provide tailored investment suggestions, please specify your individual investment goals. This could include objectives such as capital appreciation, income generation, retirement planning, or risk tolerance. Understanding these details will enable us to recommend investments that align closely with your specific needs and financial aspirations.

My investment goal is to save for retirement.

What is your investment goal?

My investment goal is to save for retirement.

Are you looking for short-term or long-term investments?

2

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Saved Prompts

What is your risk tolerance (Low, Medium, High)?

2

Here are your personalized investment recommendations:
{{prompt_output}} It seems there might be some confusion. Can you please specify your risk tolerance as Low, Medium, or High?

Medium

Are you looking for short-term or long-term investments?

2

What is your risk tolerance (Low, Medium, High)?

3

Type here...

Saved Prompts

Here are your personalized investment recommendations:
{{prompt_output}} Apologies for the confusion earlier. Let's discuss your investment options based on your medium risk tolerance and long-term investment horizon.

1. Mutual Funds: Mutual funds pool money from multiple investors to invest in a diversified portfolio of stocks, bonds, or other assets. They are managed by professionals and are a great way to gain exposure to a wide range of investments without having to manage them yourself. The risk-return profile is medium, aligning with your risk tolerance. It can offer a higher return than lower-risk options but can have periods of volatility.

2. Index Funds: An index fund is a type of mutual fund with a portfolio constructed to match or track the components of a market index, such as the Standard & Poor's 500 Index (S&P 500). An index mutual fund is said to provide broad market exposure, low operating expenses, and low portfolio turnover. These funds follow their benchmark index no matter the state of the markets. Index funds are generally considered ideal core portfolio holdings for retirement accounts, such as individual retirement accounts (IRAs) and 401(k) accounts.

3. Real Estate Investment Trusts (REITs): These are companies that own or finance income-producing real estate across a range of property sectors. Most REITs trade on major stock exchanges, and they offer a number of benefits to investors. A REIT is a company that owns, operates, or finances income-generating real estate. Modeled after mutual funds, REITs pool the capital of numerous investors. This makes it possible for individual investors to earn dividends from real estate investments—without having to buy, manage, or finance any properties themselves.

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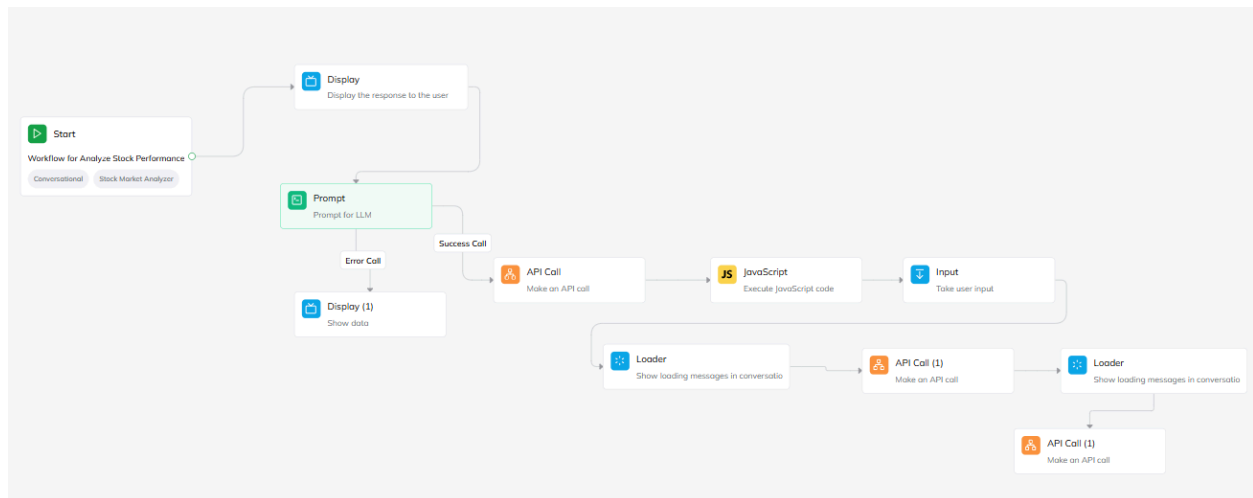
2. Stock Market Comparison Agent

Description: This agent allows users to input a natural language query (e.g., "Compare Apple and Microsoft stock performance"), extracts the company names using an LLM, fetches stock data via APIs, and presents a comparative analysis to the user. It provides an interactive and intelligent way to explore stock insights.

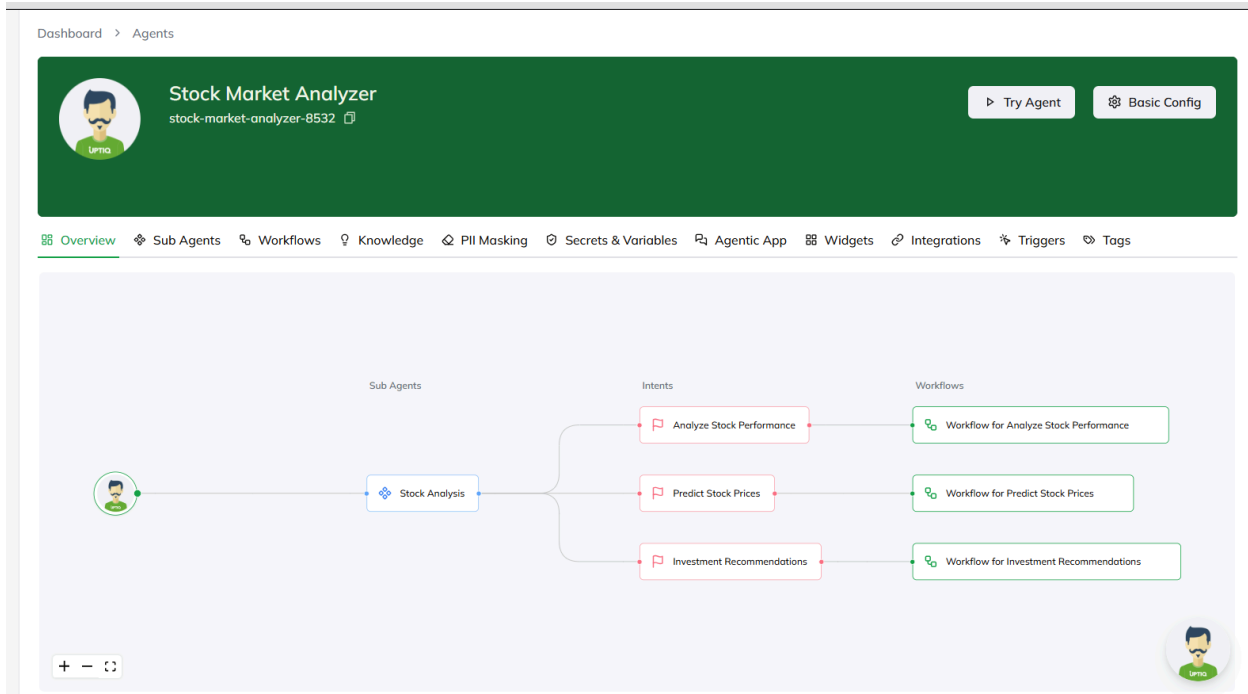
SubAgent: Stack Analysis

Intent: Analyze Stock Performance

Workflow: In this workflow, the user's query is first processed by a Prompt node, which uses an LLM to extract company names. The extracted names are sent to an API Call to fetch stock metadata, which is then cleaned and formatted using a JavaScript node. An Input node collects the user's final selection of companies for comparison, followed by a series of API Calls to retrieve historical or performance data. Throughout the process, Loader nodes maintain user engagement, and finally, a Display node presents the comparison results in a user-friendly format.



Workflow of Stock Market Comparison Agent

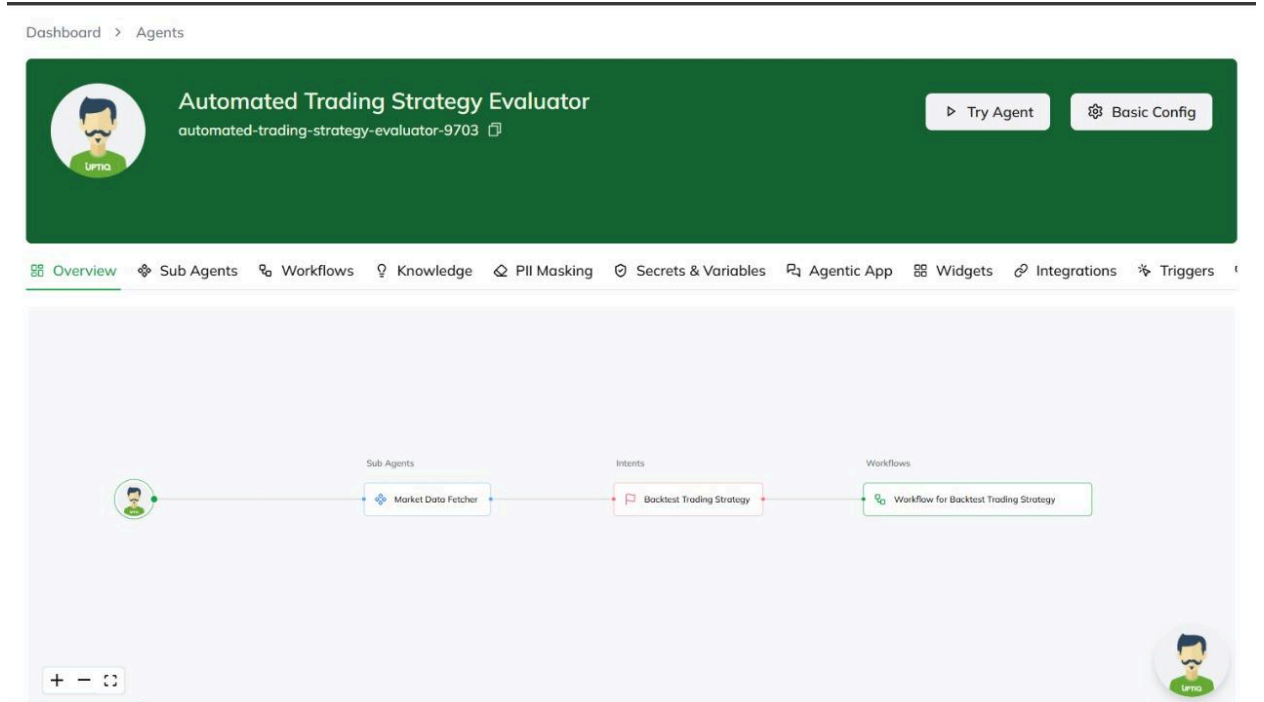


Overview of Stock Market Comparison Agent

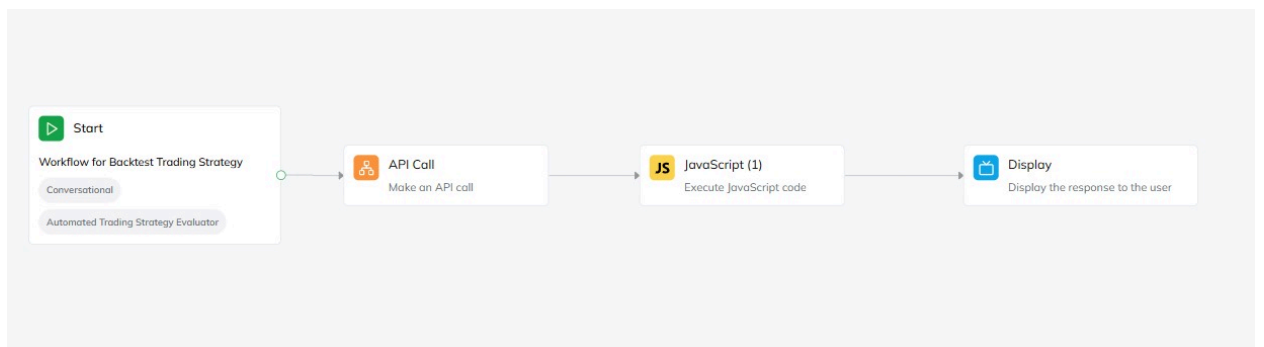
3. Investment strategy evaluator

Description: This agent helps users evaluate trading strategies by automatically fetching real-time and historical stock data through APIs, and computing key performance metrics like win rate, Sharpe ratio, and maximum drawdown. It starts with a user input (e.g., “Evaluate SMA strategy for AAPL”), retrieves relevant stock indicators, and processes them using JavaScript logic. The final insights are then displayed in a clear, user-friendly format. This workflow offers a practical, scalable solution for automated backtesting and strategic decision-making, making it highly relevant for investors, traders, and hackathon judges.

Implementation :



Overview of Investment strategy evaluator




Workflow of Investment strategy evaluator

Code of Javascript node :

```

const main = async (input) => {
  try {
    const stockSymbol = input.stock || "AAPL"; // Default stock
    const apiKey = "YOUR_API_KEY"; // Replace with your actual API key

    //  Properly formatted API URL
    const url =
      https://www.alphavantage.co/query?function=TIME_SERIES_DAILY&symbol=${stock
      Symbol}&apikey=${apiKey};
  }
}
  
```

```

const response = await fetch(url);
const data = await response.json();

// ✅ Check if API returned valid stock data
if (!data["Time Series (Daily)"]) {
  return { error: "Invalid stock symbol or API limit exceeded." };
}

// ✅ Extract the latest stock price
const timeSeries = data["Time Series (Daily)"];
const latestDate = Object.keys(timeSeries)[0]; // Get most recent date
const latestClose = timeSeries[latestDate]["4. close"];

// ✅ Generate simulated trading metrics
const winRate = Math.floor(Math.random() * (85 - 60 + 1)) + 60; // Random
60-85%
const sharpeRatio = (Math.random() * (2.0 - 0.8) + 0.8).toFixed(2); // Random 0.8 -
2.0
const maxDrawdown = -(Math.floor(Math.random() * (20 - 5 + 1)) + 5); // Random
-5% to -20%

return {
  stock: stockSymbol,
  latest_price: $$ {latestClose},
  win_rate: $ {winRate}%,
  sharpe_ratio: $ {sharpeRatio},
  max_drawdown: $ {maxDrawdown}%
};

} catch (error) {
  return { error: "An error occurred while fetching data." };
}
};

// ✅ Run the function with a test stock symbol
main({ stock: "TSLA" })
  .then(console.log)
  .catch(console.error);

```

