

# Agentic Financial Analytics Project Report

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## 1. Executive Summary

The development of a multiagent financial analytics platform marks a significant advancement in leveraging AI for real time financial decision making. By integrating PHI Data's agent framework with Groq's API, the project harnesses two specialized agents—one for web based data collection and another for in depth financial analysis. This collaboration ensures that users receive timely, accurate, and actionable insights, enhancing both the speed and quality of investment decisions.

## 2. Project Overview

### 2.1 Key Components

#### Web Search Agent:

- Purpose: Scours the internet for reliable and current financial news and data.
- Tools Used: DuckDuckGo for sourcing high quality financial information.
- Functionality: Filters and aggregates data from trusted sources such as Bloomberg, Reuters, and Yahoo Finance.
- Provides summaries with key insights, source links, and publication dates.

#### Financial Agent:

- Purpose: Extracts, processes, and analyzes financial metrics.
- Tools Used: YFinance for stock prices, analyst recommendations, fundamentals, and company news.
- Functionality: Structures data into easy to read tables and provides a comprehensive analysis that includes actionable recommendations (e.g., Buy, Sell, Hold).

#### MultiAgent Integration:

- Purpose: Ensures seamless collaboration between the web search and financial agents.
- Outcome: Delivers a comprehensive report that cross references multiple data sources, ensuring both accuracy and depth of analysis.

## 2.2 Technical Stack

- **PHI Data Agent Framework:** Enables modular agent design for scalable and maintainable AI systems.
- **Groq API & Llama Models:** Provide robust natural language understanding and generation capabilities.
- **ThirdParty Tools:**
  1. **DuckDuckGo:** For fetching high quality, uptodate financial news.
  2. **YFinance:** For acquiring detailed financial metrics and data.

## 3. Importance and Impact

### 3.1 Enhanced Decision Making

- **Actionable Insights:** The platform not only aggregates data but also interprets it, offering clear recommendations (Buy, Sell, Hold) based on current market trends.
- **RealTime Data Integration:** By pulling in the latest news and financial metrics, the system minimizes the latency between data availability and actionable insights, which is crucial in a volatile market environment.

### 3.2 Efficiency and Reliability

- **Automated Data Synthesis:** The agentic approach minimizes manual data handling and analysis, reducing human error while speeding up the decision making process.
- **CrossVerification:** The collaborative nature of the agents ensures that data is cross verified from multiple sources, enhancing the reliability and credibility of the output.

### 3.3 Scalability and Adaptability

- **Modular Design:** The system's modularity allows for easy integration of additional agents or tools in the future, ensuring that the platform can evolve alongside changing market dynamics and technological advancements.
- **FutureProofing:** With a robust underlying architecture and advanced AI models, the platform is well positioned to adapt to future financial data challenges and opportunities.

## **4. Strategic Benefits**

- **Empowering Investors:** Provides retail and institutional investors with a powerful tool to analyze and act on financial data efficiently.
- **Competitive Advantage:** Organizations that integrate such agentic systems can gain a competitive edge through faster, more informed decision making and enhanced risk management.
- **Market Responsiveness:** The combination of real time data and actionable insights makes the platform indispensable in a rapidly evolving financial landscape.

## **5. Conclusion**

The agentic financial analytics project represents a significant leap forward in the use of AI for financial decision making. By merging advanced web search capabilities with detailed financial data analysis, the project not only streamlines the process of market evaluation but also empowers users with the tools necessary to navigate complex financial environments. This innovative approach, underpinned by state-of-the-art technologies like PHI Data and Groq's API, is poised to set new standards in financial analytics, ensuring that decisions are both timely and based on reliable, multifaceted data.