



CODECELL-CMPN, VESIT

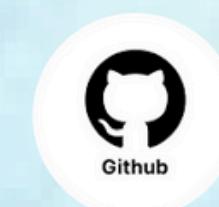
SIRIUS HACKATHON 2025

Category Code: C5

Problem Statement Title: Investment & Stock Market Insights

Team Name: Byte_Me

Institute Name: Vivekanand Education Society's Institute of Technology



Idea / Approach details (& implemented features)



Overview:

FinX AI revolutionizes stock market analysis by merging traditional financial metrics with non-traditional signals.



Key Components:

Integration of structured financial data with unstructured data (social media, news, geopolitical events).

Use of generative AI to synthesize diverse data into actionable, predictive investment insights.

Goal:

Enable faster, more informed decisions by uncovering hidden market patterns beyond traditional analysis.



Innovation (Showstopper)



Portfolio Insights using RAG:

Uses personalized portfolio data and advanced generative AI to create contextualized, real-time investment recommendations that align individual assets with dynamic market intelligence, democratizing institutional-grade investment analysis.

Cross-Asset Correlation Insights:

Analyzes interdependencies between stocks, commodities, bonds, and cryptocurrencies.

Multimodal Sentiment Analysis:

Aggregates sentiments from financial news, social media, and expert opinions.

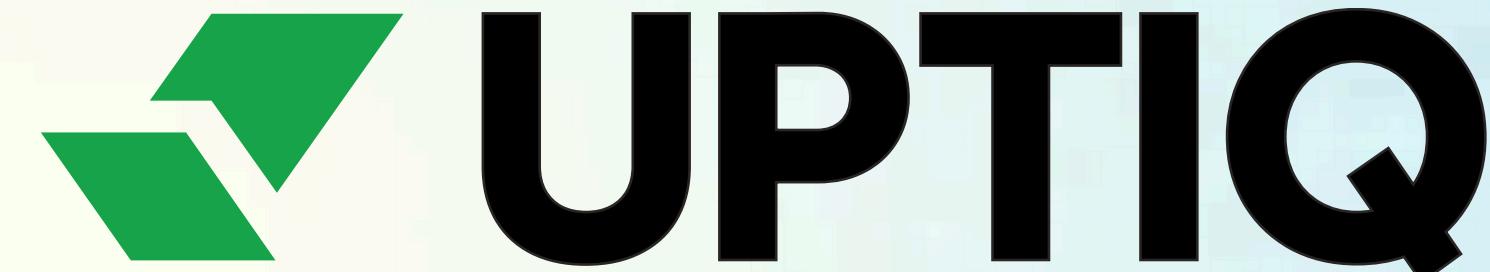
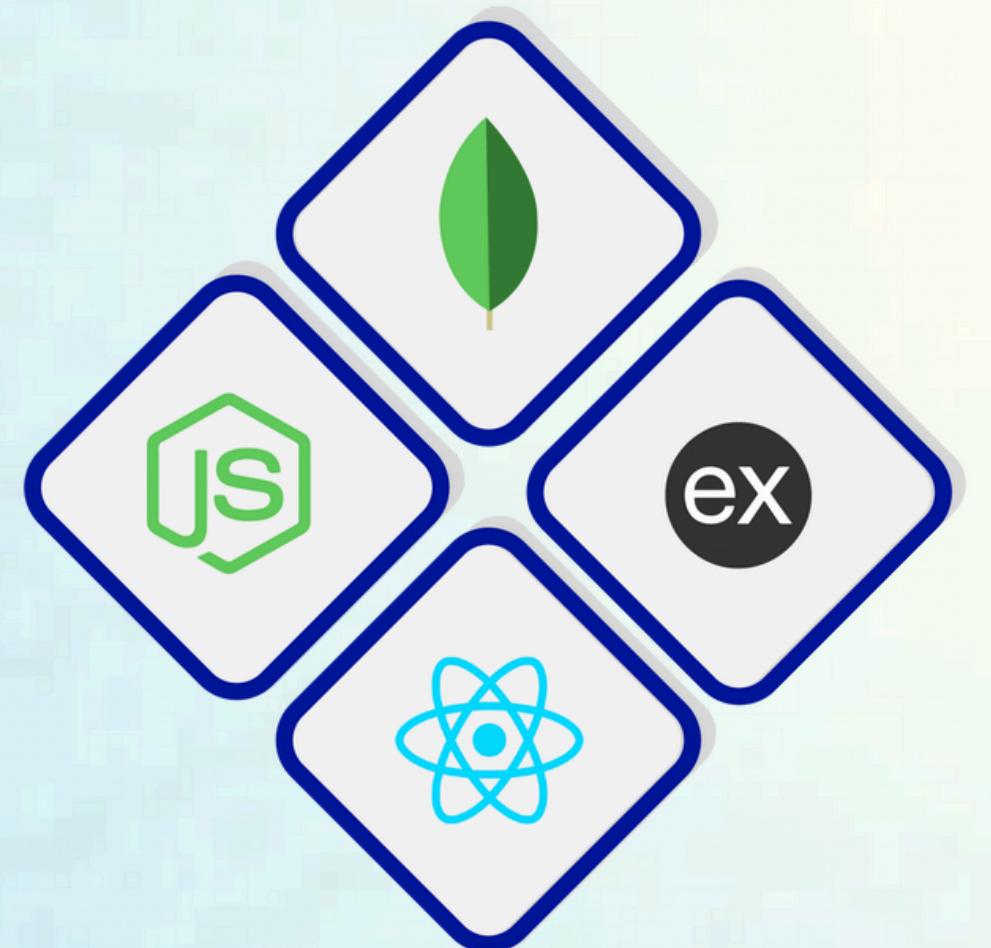
Real-Time Geopolitical & Economic Risk Assessment:

Continuously monitors global events and policy changes, quantifying their potential market impact.



Tech Stack

Frontend:
Built on the MERN stack for a robust
and scalable interface.



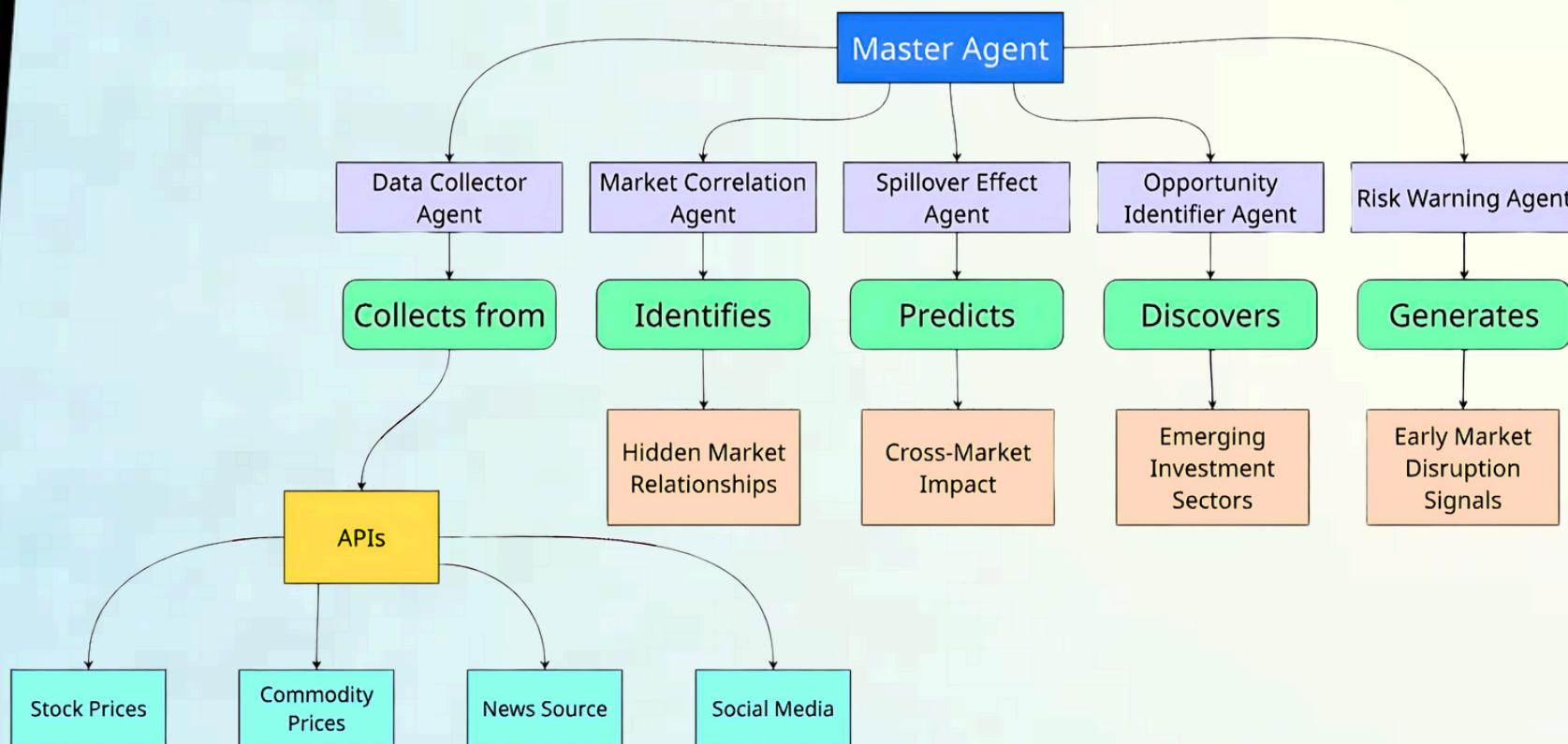
**Powered by UPTIQ Console with components
including:**

- **Data Gateway:** Real-time data access
- **Workflow Builder:** Automates analytics
- **Reliable AI:** Trustworthy insights
- **Security & Compliance:** Protects financial data

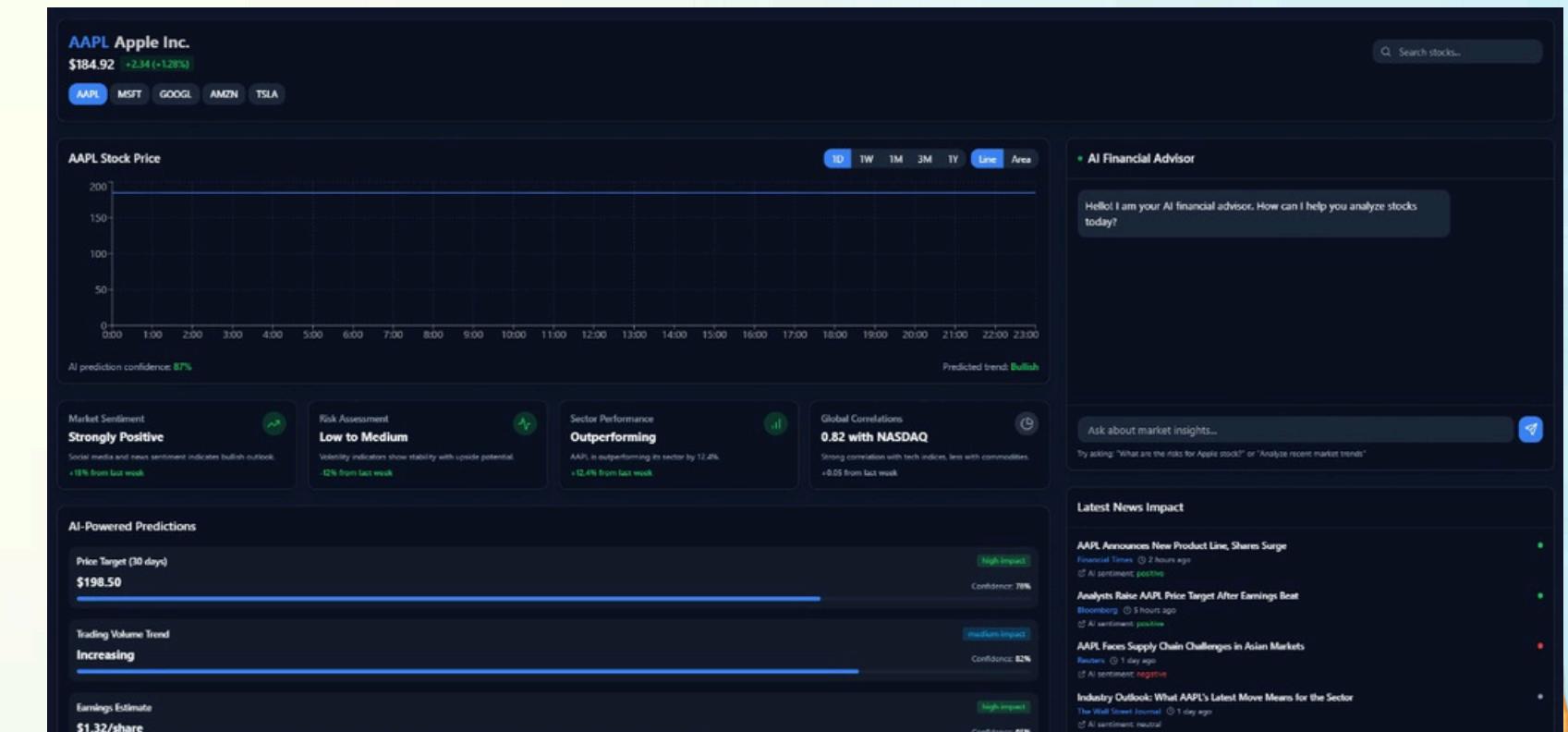


Implementation/Prototype/Use Case Diagram (screenshots)

Use Case Diagram



User Interface



In case of Uptiq category - Your Uptiq Agent (explain in detail)

Operational Workflow

- **Data Acquisition & Preprocessing:** Ingesting economic indicators, social media feeds, market data, and news sources; normalizing & structuring data.
- **AI-Driven Analytics:** Large language models for sentiment analysis, correlation mapping, trend identification, and predictive forecasting
- **Inference & Decision Support:** Generating insights, risk assessments, anomaly detection, and strategic recommendations
- **Automated Execution & Reporting:** Triggering alerts, generating reports, executing predefined strategies, and continuous model refinement

System Architecture:

- **Sub-Agents:** Modular AI components for domain-specific analysis
- **Intents:** Task-specific cognitive functions executed by sub-agents
- **Workflows:** Automated pipelines for data ingestion, processing, and decision-making



Future Objectives

Data Expansion:

Incorporate additional alternative data sources to further enhance analysis.

Enhanced Predictive Modeling:

Continuously upgrade generative AI models for improved accuracy and learning.

Broader Market Coverage:

Extend the tool to include multiple asset classes and international markets

User Customization:

Develop personalized dashboards and alerts tailored to different investor profiles and risk tolerances.

Scalability & Compliance:

Scale cloud-based infrastructure to support real-time processing and ensure ongoing adherence to evolving regulatory standards.

