

# FINANCIAL PLANNING CHATBOT

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Systems Analysis

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# General System Representation



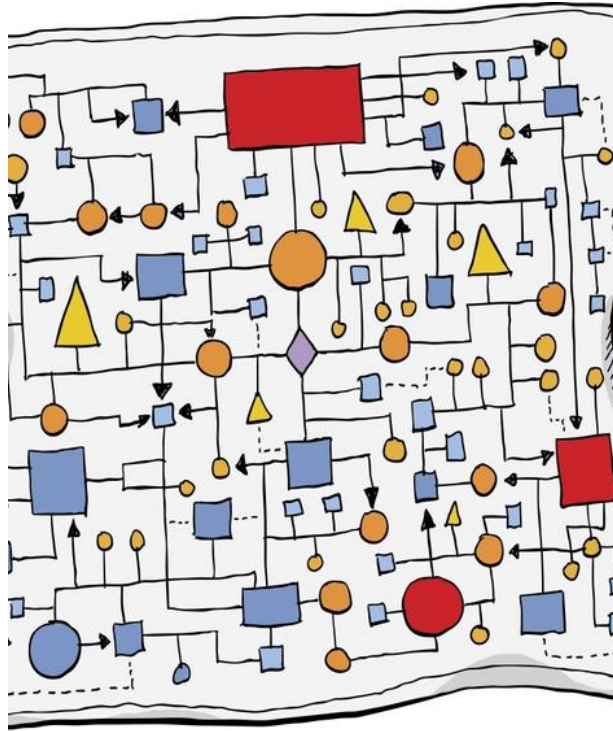
- A general financial system using an LLM involves several core components: data input, natural language processing, and output generation.
- The system collects real-time financial data, such as stock prices and economic trends, and processes it through the LLM.
- The model recognizes patterns and generates personalized financial insights.
- The system is designed to adapt to changing market conditions, ensuring relevant and context-aware responses.

# System Sensitivity Analysis



- The financial market is highly sensitive to external factors, such as economic shifts, geopolitical events, and investor sentiment. Market inputs, like stock prices and interest rates, are volatile and unpredictable.
- The randomness and frequent fluctuations in market inputs introduce variability in the model's predictions.
- Constant updates are required to maintain accurate and contextually relevant responses.

# System Complexity Analysis



- The complexity of the financial market stems from its unpredictable, stock-driven nature and the influence of numerous interconnected variables, such as global economies and investor behavior.
- However, the market's stochastic elements and rapid shifts increase computational challenges.
- They aim to provide reliable, real-time analysis while balancing accuracy and processing speed.

# Emergent Behaviors

- Emergent behaviors in financial systems arise from the unpredictable interaction of global events, market trends, and investor actions.
- These emergent behaviors highlight the system's ability to self-adapt, influenced by real-time data, world events
- Ultimately, this creates responses that evolve as new inputs or situations arise, and complex market conditions.

