

# Financial Planning Chatbot

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**Abstract**—The financial market is volatile and complex, often requiring individuals to make informed decisions quickly. With advancements in artificial intelligence, large language models (LLMs) have emerged as powerful tools for understanding and generating human-like text, enabling the creation of financial planning assistants. This paper presents a financial planning chatbot powered by a LLM, designed to provide personalized financial advice based on user input aimed at assisting users in managing their finances more effectively.

## I. INTRODUCTION

Financial markets are notoriously difficult to predict, as stock prices, interest rates, and economic conditions are constantly changing. This volatility presents challenges for individuals seeking to make informed financial decisions. Traditional financial advisors are expensive and often inaccessible to the general population, making automated tools essential for greater accessibility of this information to the general population.

Recent advances in artificial intelligence (AI) have made it possible to develop systems capable of understanding and generating human-like responses. Large language models (LLMs), in particular, are well-suited for tasks that require a deep understanding of natural language. In this article, we explore the design of a financial planning chatbot based on an LLM.

This article describes the development of the financial planning chatbot and examines its effectiveness in handling real-time financial data. We focus on its ability to provide personalized financial advice, addressing the unique needs of each user and taking into account the inherent volatility of the market.

## II. METHOD AND MATERIALS

The financial planning chatbot is built around three main components: the user interface, an LLM for natural language processing, and a financial data integration module. Users can ask financial questions, and the LLM interprets their queries. The system retrieves relevant financial data, such as stock prices and savings rates, from real-time sources to offer tailored advice.

The decision to use an LLM was driven by its ability to understand diverse natural queries and generate accurate, personalized responses. Unlike traditional systems, which rely on pre-programmed rules, the LLM can process a wide range of input without extensive reprogramming.

To ensure that the chatbot could handle dynamic market conditions, we must integrate a real-time financial data. This allows the system to offer up-to-date advice even as markets fluctuate.

## III. EXPECTED RESULTS

Expected results in financial systems driven by LLMs include accurate, context-specific insights based on real-time market data. The model is expected to generate personalized financial advice by recognizing patterns in dynamic inputs like stock fluctuations and economic indicators. LLMs should adapt quickly to changes, providing relevant responses that align with current financial trends. Additionally, the system is expected to handle diverse queries with flexibility, ensuring scalability while maintaining performance and delivering precise, timely information despite the inherent volatility of financial markets.

## REFERENCES

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