

AI POWERED INVESTMENT ADVISORY CHAT-BOT

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BUSINESS PROBLEM & OBJECTIVE

Many individual investors face challenges in obtaining real-time insights into their financial portfolios and lack access to personalized investment advice tailored to their risk tolerance and interests. Traditional tools often fall short in combining live market data with strategic guidance, leaving retail users dependent on time-consuming manual research or expert consultation. This project aims to address that gap by developing a scalable, AI-powered chatbot capable of analyzing user portfolios, interpreting market trends, and delivering conversational, personalized financial recommendations in real time.

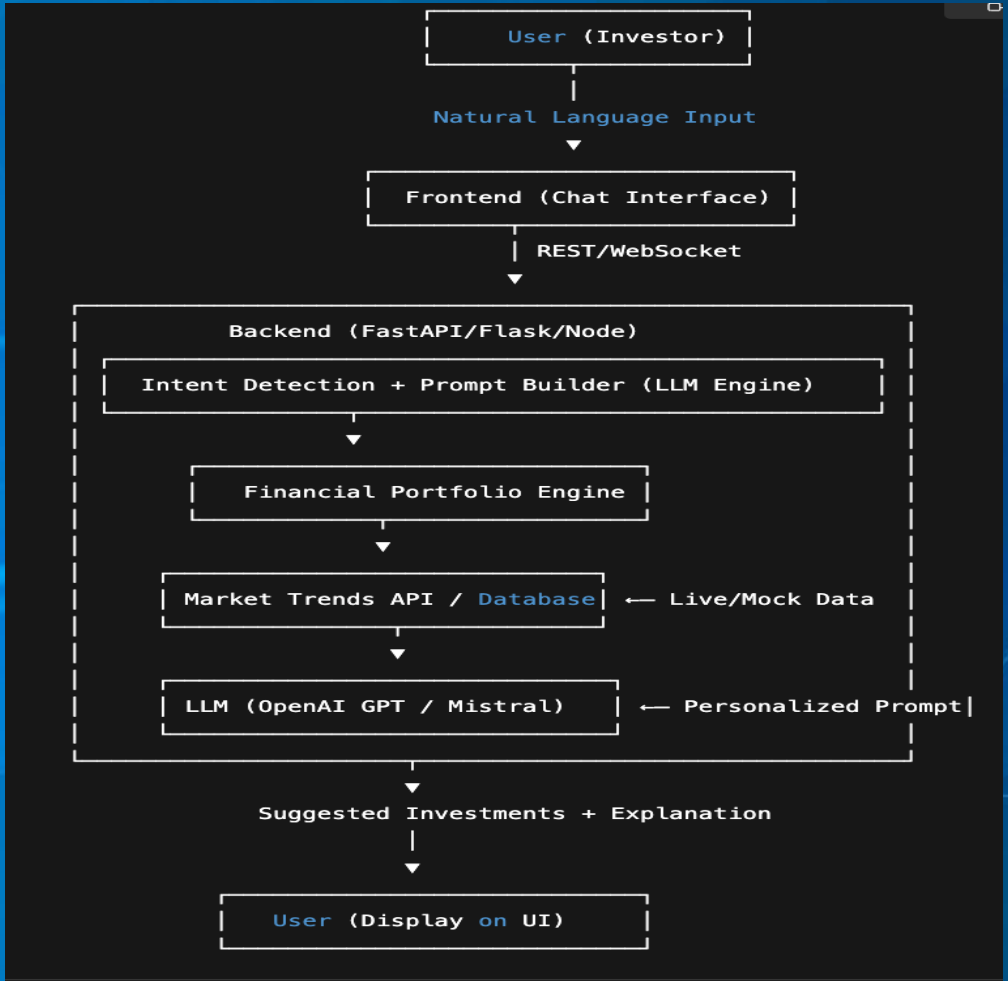
Data-Sources and Methodology

- Financial Modelling Prep API for real-time stock, crypto, and market trend data.
- User-input portfolio data including symbol, quantity, and buy price.
- Sector performance and news sentiment derived from FMP’s trend and sentiment endpoints.
- Prompt engineering for GPT-based LLM to generate contextual responses.
- Modular backend with separate logic for portfolio analytics, prompt construction, and market trend fetching.

Business Impact & Scalability

- Supports beginners and semi-professionals navigating financial decisions.
- Easily expandable to mutual funds, ETFs, real estate, or debt instruments.
- Cloud-ready backend (Node.js/Express) for enterprise deployment.
- Opens potential for monetization via subscription, partnerships, or white-labeling.

Architecture



DEMO Highlights

Investment Portfolio Chatbot

Symbol	Quantity	Buy Price
AAPL	10	150
TSLA	5	220
GOOG	20	60
Add Asset		

Risk:

Interests (comma-separated):

You: Can you analyze my portfolio and suggest what I should hold, sell, or add?

Bot:
Based on your portfolio and preferences, here's a detailed analysis along with recommendations for each of your holdings:

Current Portfolio Overview

- Apple (AAPL)**
 - **Current Value:** 10 units x \$212.50 = \$2,125.00
 - **Purchase Price:** \$150 per unit
 - **Performance:** +41.67%
 - **Recommendation:** **Hold**
 - Apple remains a strong player in the tech sector with continuous innovation and good revenue

Ask me anything...

Investment Portfolio Chatbot

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Add Asset		

Risk:

Interests (comma-separated):

You: what sectors are trending right now?

Bot:
Currently, several sectors are trending positively in the market, particularly those aligned with your interests in energy and technology. Here's an overview of the sectors that are gaining traction:

1. Technology Sector

- **Key Drivers:** Rapid advancements in artificial intelligence, cloud computing, and cybersecurity are fueling growth. Companies like Apple (AAPL) and Google (GOOG) are benefitting from these trends, as evidenced by your portfolio gains.
- **Opportunities:** Look for investments in AI-related firms, semiconductor companies, and cybersecurity providers. The demand for tech solutions continues to rise as businesses digitize and protect their data.

Ask me anything...

Ethical / Responsible AI Consideration

- Chatbot explicitly states it does not provide licensed financial advice.
- Suggestions are informational and not prescriptive or deterministic.
- LLM prompts constrained to user-provided and validated market data.
- User data is not stored or used for training—ensures privacy.