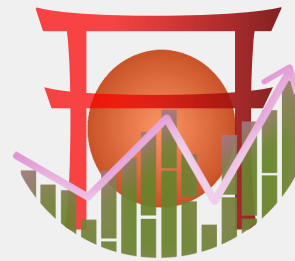# StockSensAI

Final Presentation

Brett Heckman, Lane Crowder, Kevin DeWall

ORIGINAL CHALLENGE

ORIGINAL CHALLENGE
INVESTING IS INTIMIDATING

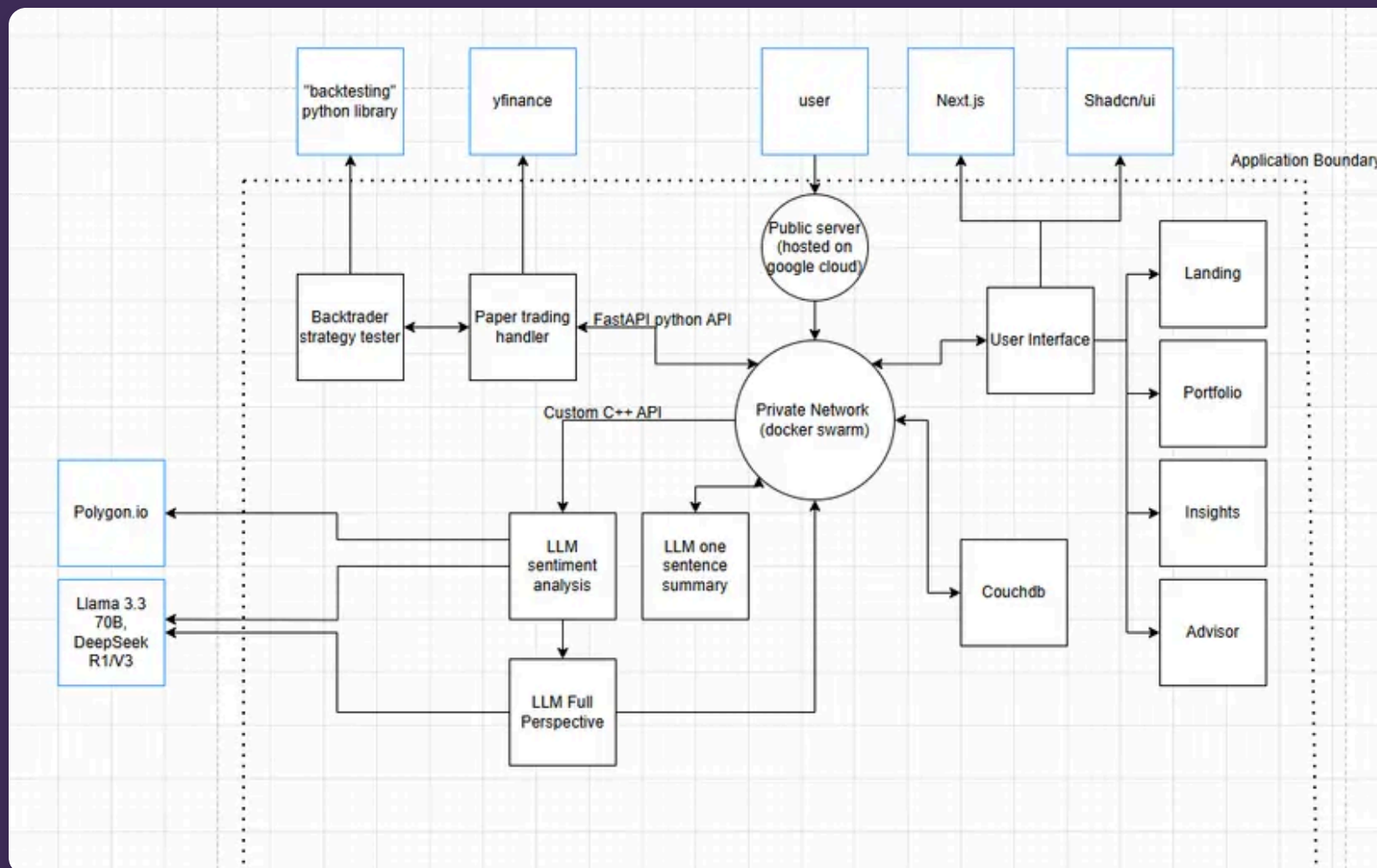# ORIGINAL CHALLENGE

INVESTING IS INTIMIDATING

❌ **EXISTING APPS = NO GUIDANCE**

☹ **SIMULATORS = NO ASSISTANCE**

SYSTEM CONSTRUCTION

SYSTEM CONSTRUCTION

SOFTWARE SOLUTION

SOFTWARE SOLUTION

All skill ranges

Useful, easy-access information

Benefits of open source

STRENGTHS & LIMITS

STRENGTHS & LIMITS

Strengths	Limits
Chat, news analysis, and other LLM features offer comprehensive guidance for making investment decision.	Only one predefined investing algorithm and one user-defined algorithm.
Ability to buy and sell stocks across multiple portfolios allows users to invest to their hearts content and play around with as many strategies as they desire.	Limited to 200 free requests to llm per day, could be scaled/sped up with more money
UI is easy to use and makes it simple to get started quickly.	
Users are able to see how the predefined strategy performs on historical data to see if they want to start it on a particular stock.	

EXTENSIBILITY

EXTENSIBILITY

Users can add their own strategies and test them using existing framework in the repository.

Containerization of the components allows each to be completely independent, simplifying future development and deployment.

Preferences can be set to use the state of the art open source LLM models (LLAMA 70B, DeepSeek R1/V3)

REQUIREMENTS

REQUIREMENTS

3. The user should be able to interact with a specialized LLM that gives the user information about the stock and comes to a conclusion about whether the user should buy, sell, or hold said stock.

News Analysis
Analyze news sentiment for your portfolio.

Action: Hold
The sentiment analysis of recent news articles about Microsoft (MSFT) shows a predominantly positive outlook (8 positive, 6 neutral, 1 negative). Key positives include Microsoft's strong position in AI, cloud computing, and the Edge AI market, as well as its inclusion in major indices like the Nasdaq 100 and S&P 500. Neutral sentiments highlight Microsoft's role as a competitor in AI and its upcoming earnings report, which could impact the market. The single negative sentiment relates to underperformance of the 'Magnificent Seven' stocks in 2025, but this is not specific to Microsoft's fundamentals. Given the overall positive sentiment and Microsoft's diversified business model, holding the stock is advisable pending further earnings insights and market developments.

How Google Can Emerge as the Underdog AI Winner
5 hours, 0 minutes, 30 seconds

Google's AI investments in Google Cloud Platform and Gemini AI model are positioning the company to compete with rivals like Microsoft and OpenAI in the AI race. Google's ecosystem of services like Android, Google Workspace, and YouTube provide a strong foundation for its AI-driven offerings.

SENTIMENT: NEUTRAL

Reasoning: The article portrays Microsoft as a key

Show more

ICT Adoption in Travel & Hospitality Set to Accelerate, Projected to Grow at 7.9% CAGR by 2030
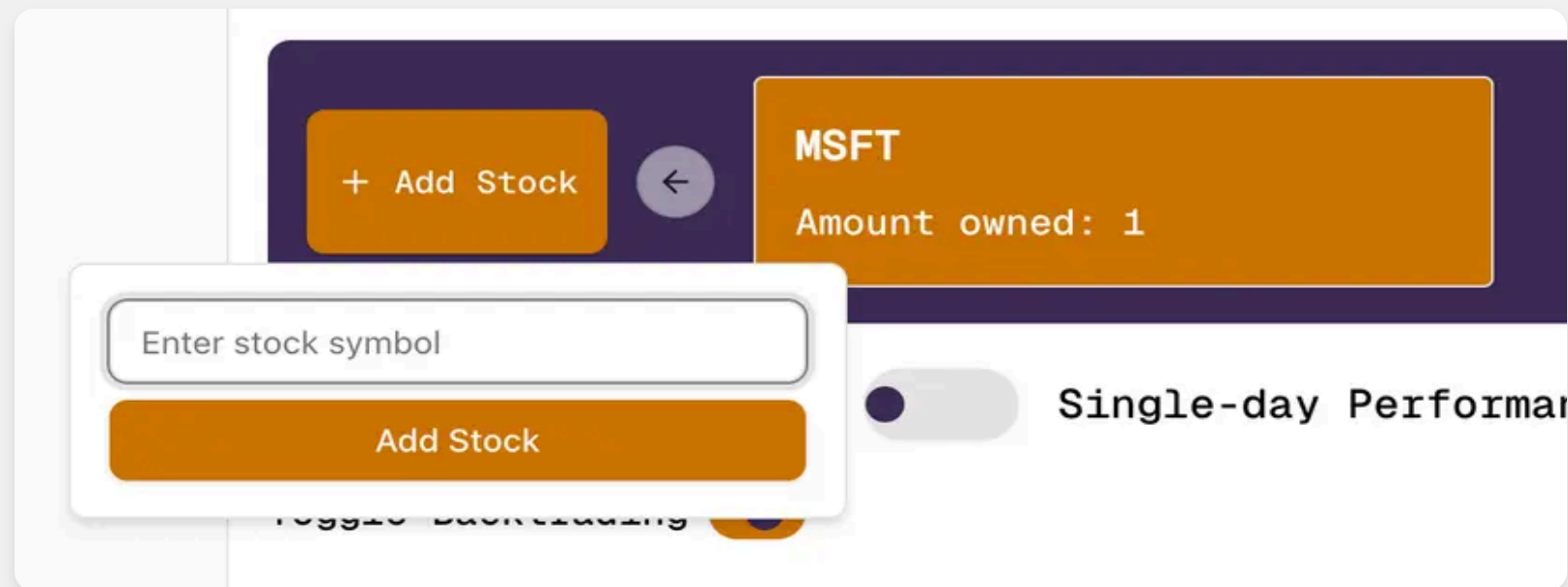7 hours, 45 minutes, 30 seconds

The travel and hospitality industry is projected to grow at a 7.9% CAGR through 2030, driven by the increasing adoption of information and communication technology (ICT) to enhance guest experiences, operational efficiency, and revenue management.

SENTIMENT: POSITIVE

Show more

REQUIREMENTS

2. The user interface should be able to display and select any stock with a ticker and have that stock show up in their portfolio. The application should then be able to look up the current value of the stocks owned by the user and compare it to the original account balance to show gains/losses.

REQUIREMENTS

4. The application should support investment strategies that are automatically executed without user intervention. The user should be able to switch between manual trading and automatic trading whenever they desire.
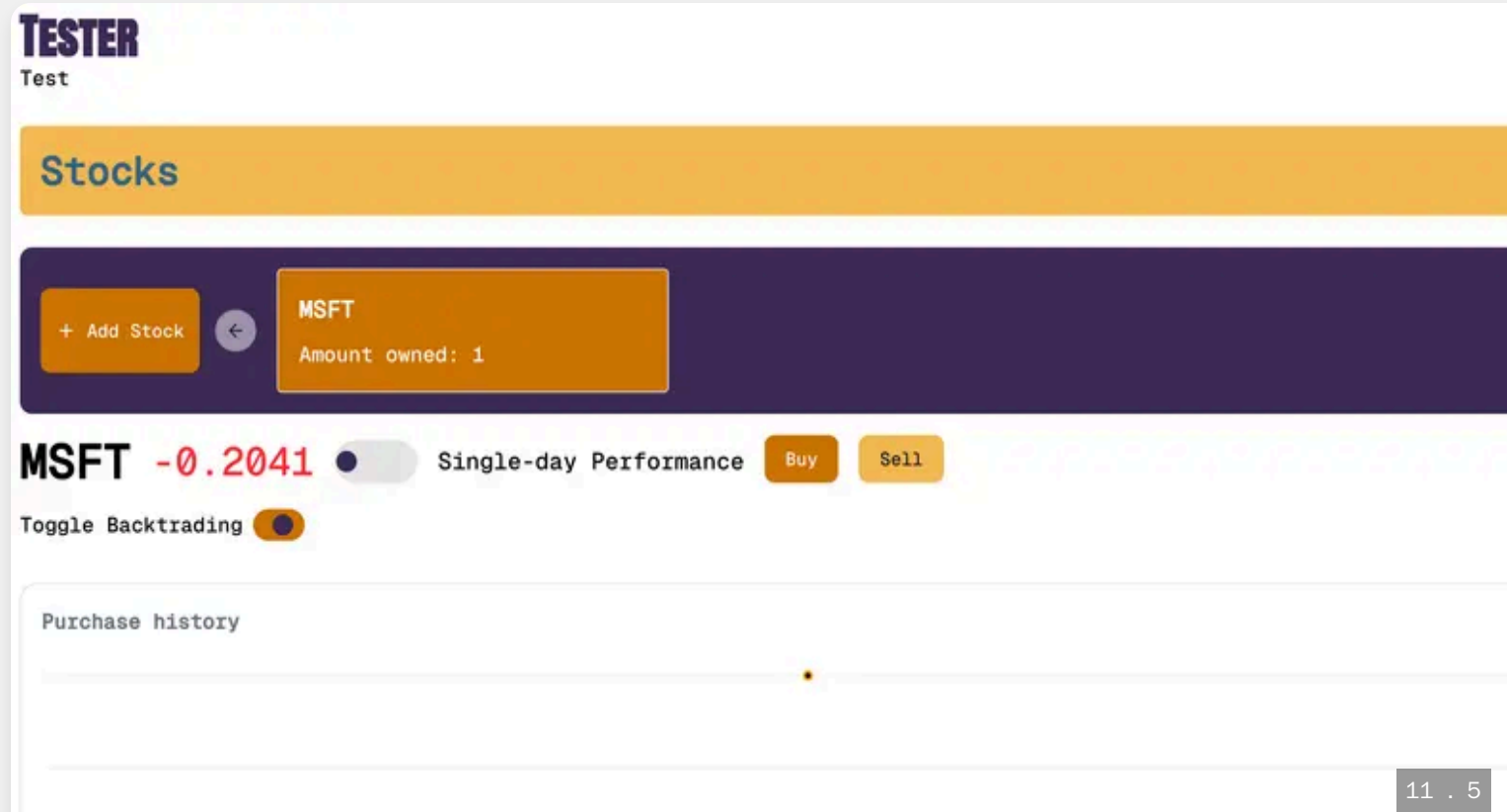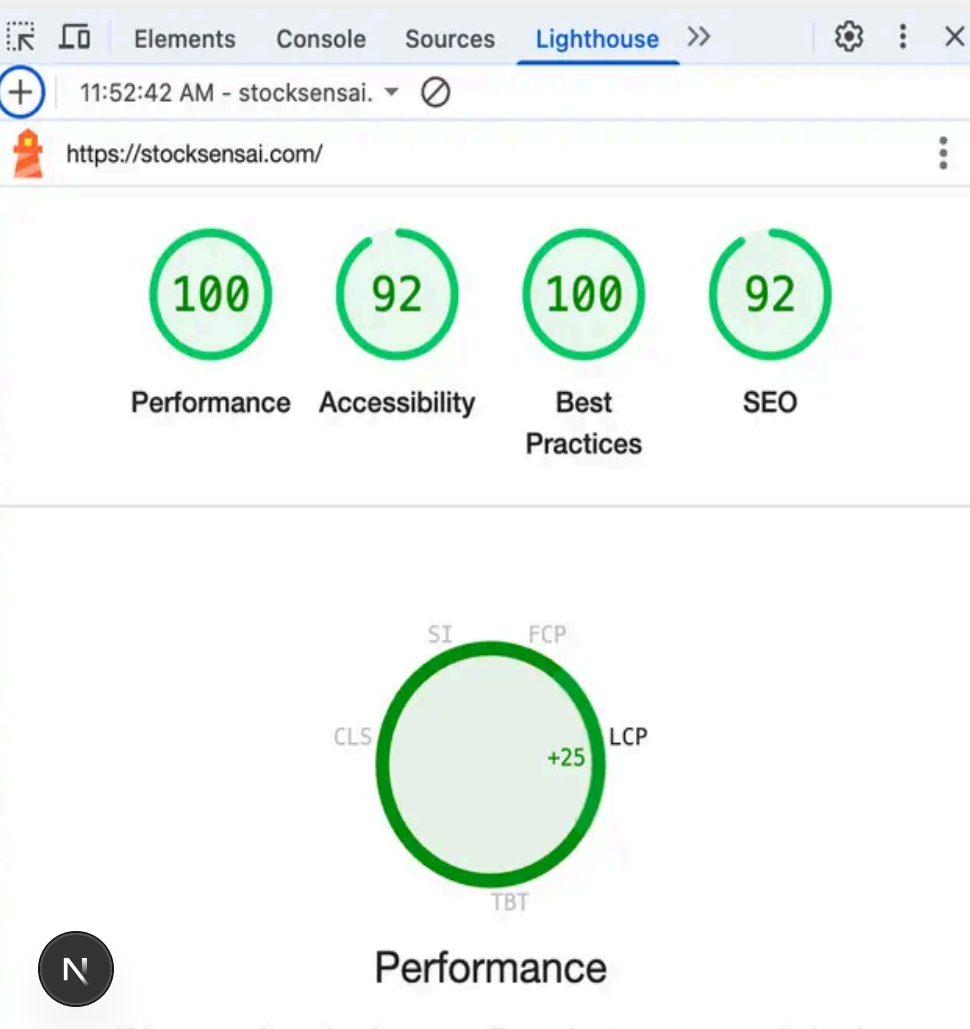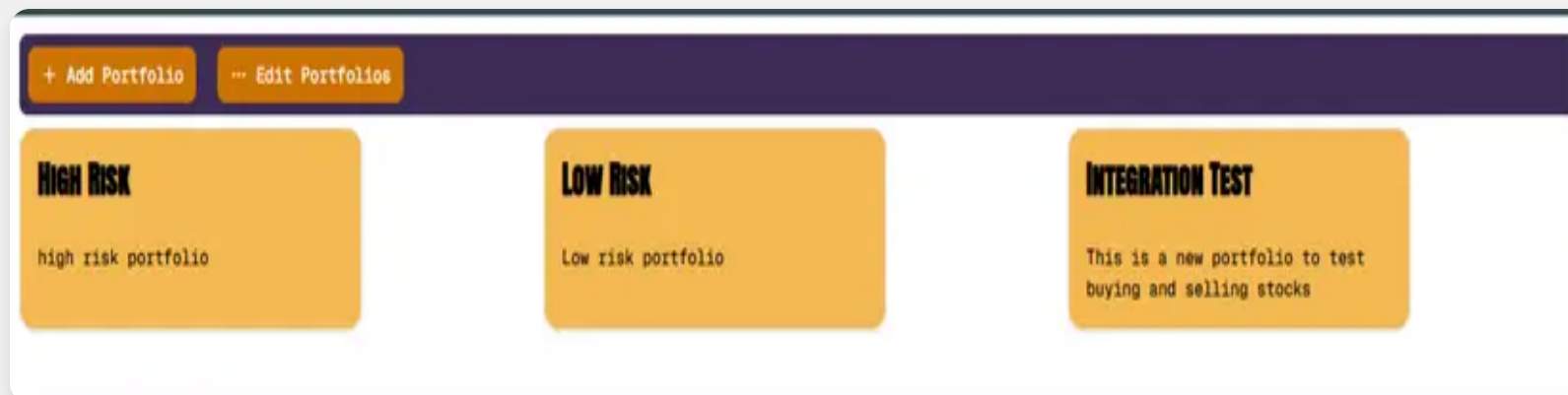
REQUIREMENTS

1. The application interface should look similar to established trading platforms to familiarize the user with a typical trading environment. The user interface shall also meet at least a 90 on the accessibility score when measured against accessibility checkers like Chrome Lighthouse to ensure usability and readability for everyone.

REQUIREMENTS

5. The application should keep track of multiple portfolios per user to enable the user to try out different strategies and switch seamlessly between them.

UPDATES SINCE MIDTERM

Integration

Single-Sentence Summary

Automatic strategy execution

Displaying performance across multiple portfolios

Selection between different models for LLM endpoints

DESIGN IMPROVEMENTS

For algo trader, clean and simple strategy definition that uses backtesting library for easy additional strategy definitions. Backtester runner that displays bargraph of performance over time of strategies for strategy development. Cleaner API definition to make integration easier.

For LLM backend, added threading to handle more requests and the DeepSeek series of models

FUTURE WORK

Integrate full perspective analysis

Add visualization of algorithmic trading strategy run on historical data

Design a more flexible strategy that users can tweak parameters on and run automatically

DEMO