

Development of an Integrated Financial Advisory Platform

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Abstract—The digital transformation of personal finance has driven the development of user-centric platforms to enhance financial control and visibility. This paper presents a Finance Management System built using ReactJS and Tailwind CSS, designed to streamline financial tracking and decision-making. Key features include account overviews, transaction histories, referral systems, a chatbot for customer support, and a live news dashboard. Emphasizing modern front-end technologies, the platform ensures responsiveness, accessibility, and maintainability. This paper details the system architecture, implementation, key features, and potential future enhancements.

Index Terms—Finance management, ReactJS, Tailwind CSS, chatbot, referral system, financial dashboard, LSTM

I. INTRODUCTION

Managing personal finances in the digital era is increasingly complex due to diverse income streams, rising expenses, and volatile investment opportunities. This project introduces an intuitive finance management application, empowering users with tools for real-time stock updates, income and expense tracking, budget management, and AI-driven financial advice. The platform integrates visually engaging data representations, such as graphs and charts, to simplify financial insights. By consolidating these tools, the solution enhances decision-making and supports long-term financial goals.

II. LITERATURE REVIEW

Mobile finance applications improve financial literacy through budgeting and expenditure tracking, yet poor user experiences lead to high abandonment rates [1]. Advanced AI models, such as LSTM and SVM, enhance stock price prediction when paired with sentiment analysis [7], [8]. Chatbots improve user satisfaction in finance apps but struggle with complex queries [6], [9]. Human-like

chatbot designs foster emotional connections [11]. All-in-one platforms that integrate income, expenses, and investments are preferred, but most apps remain siloed [1], [2]. Enhanced dashboards and gamification can improve user engagement, while security and privacy concerns, particularly in chatbot interactions, reduce trust [4], [9].

III. METHODOLOGY

The application employs React.js and Tailwind CSS for a responsive, modular front-end. It includes a sidebar for navigation, a profile dashboard, and a finance tracker visualizing income, expenses, and balance. Authentication and logout features ensure security. The backend uses Node.js and Express.js for API management, with MongoDB for data storage.

A chatbot powered by LLaMA supports natural financial conversations. The stock prediction module uses NLP to analyze Reddit posts, applying logistic regression for sentiment classification. A news dashboard fetches IPO and stock updates via APIs or web scraping, presenting concise market information.

IV. IMPLEMENTATION

The application leverages Vite for efficient React development and Tailwind CSS for responsive UI design. Key features include:

- Chatbot: Provides predefined responses to financial queries, enhancing engagement (see Fig. 2).
- News Dashboard: Fetches real-time market news using APIs like NewsAPI (see Fig. 3).
- Income & Expense Tracker: Categorizes transactions for improved financial planning (see Fig. 4).
- Stock Prediction: Combines PRAW for Reddit sentiment analysis, VADER for sentiment

scoring, and Yahoo- Query/yFinance for real-time stock data (see Fig. 5).

V. RESULTS AND DISCUSSION

The system demonstrated excellent responsiveness across devices and handled 100 predefined chatbot queries effectively. The UI received positive feedback for clarity. React’s modular design F ensured smooth performance. Future improvements include backend integration, enhanced authentication, and real-time data synchronization.

VI. CONCLUSION AND FUTURE WORK

This project highlights the efficacy of modern front-end technologies in building user-centric finance management systems. Future enhancements may include backend database integration, real-time API connectivity, advanced chatbot NLP, and multi-language support.

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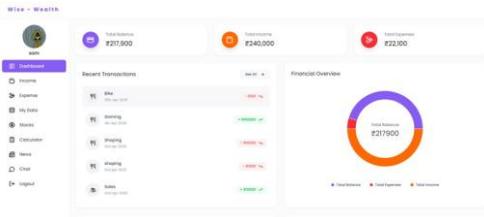


Fig. 1. Main dashboard.

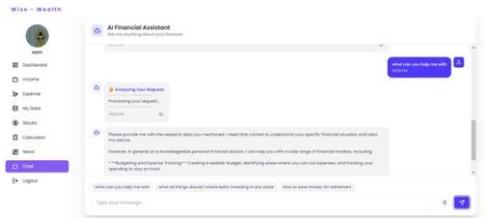


Fig. 2. Chatbot interface.

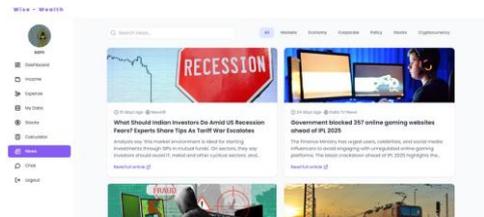


Fig. 3. News dashboard.



Fig. 4. Income & expense tracker.

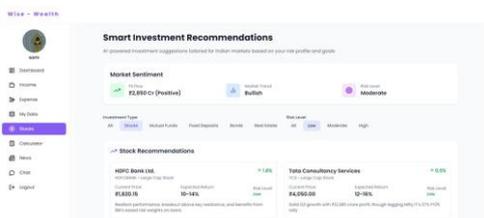


Fig. 5. Stock recommendations.

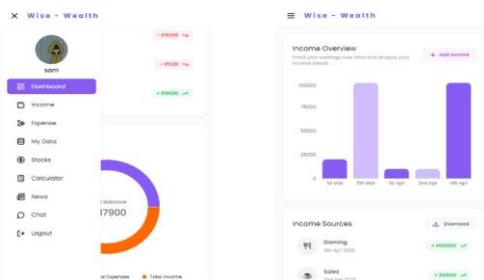


Fig. 6. Mobile responsive view.

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