



elevate your finance game.

Project Proposal

(Semester 7)

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Submitted to Projects Manager- FYP

Abstract

elevate is a financial advisory system that will help/advise retail investors that are new in the field of investment or are not currently engaged with a financial advisor. Our tool will be Leveraging LLM for and Machine Learning to generate simple yet meaningful investing advice and report cards for public listed securities. Our target is to facilitate the retail investor's long-term and short-term investing activities by providing him with a report based on comprehensive analysis and intelligent tools.

PROJECT OVERVIEW

A	<u>PROJECT TITLE:</u> elev8.ai								
B	<u>ACRONYM:</u> elev8								
C	<u>TAGLINE:</u> elevate your finance game								
D	<u>START DATE:</u> <table><tr><td>0</td><td>5</td><td>0</td><td>9</td><td>2</td><td>0</td><td>2</td><td>3</td></tr></table>	0	5	0	9	2	0	2	3
0	5	0	9	2	0	2	3		
E	<u>EXPECTED COMPLETION:</u> <table><tr><td>1</td><td>5</td><td>0</td><td>3</td><td>2</td><td>0</td><td>2</td><td>4</td></tr></table>	1	5	0	3	2	0	2	4
1	5	0	3	2	0	2	4		
F	<u>PROJECT BRIEF:</u> <p>elev8.ai is a user-centric financial advisor tool designed to provide humanized and insightful stock reports generated through the integration of OpenAI's GPT-3 (Llama) language model or other LLM (this is tentative- discovery stage ongoing). This application empowers both retail investors and professionals to make informed financial decisions with ease.</p> <p>elev8.ai offers a comprehensive set of features, including an intuitive user interface for easy access, cross-platform functionality, and guided filtration to streamline stock selection. Users can generate simple yet meaningful investing advice and report cards for publicly listed securities. The platform caters to entry to intermediate retail investors, offering personalized insights and facilitating comparative analyses.</p> <p>Key aspects of elev8.ai include a pricing structure that provides one free stock or crypto report per month for users, with paid subscriptions offering access to multiple reports and the option to keep analyses private. Additionally, an enterprise-grade comparison tool may be made available for professional investment managers.</p> <p>elev8.ai leverages machine learning and web scraping to extract financial facts and indicators from reports, as well as news related to the stock market and specific stocks or cryptocurrencies. The generated reports are presented in a user-friendly format, making financial information accessible and understandable to all users.</p>								

Elevate your finance game with elev8.ai, where AI-driven insights meet simplicity and accessibility for enhanced financial decision-making, making you the smartest investor.

PROBLEM STATEMENT

The retail investment landscape faces a significant challenge in catering to new and unguided investors who seek reliable and accessible financial advice. A substantial portion of these investors remain dissatisfied with existing AI-based advisory tools for stocks. This is due to the increase of access to security markets for retail investors, even in Pakistan PSX is working towards allowing retail investors to invest directly with minimum requirements enabling a new era of investors entering the market. Internationally the situation is similar as well.

According to CNBC, 31% of investors are currently satisfied with available AI advice. And with a market growth of 25% market being made up by retail investors; We think we can get them a better experience, and contribute to the increase of this percentage. In Pakistan there are approx 220,000 retail investors, and about 2000 foreign and domestic investment institutions. One might assume that these institutions contribute more to trading than retail investors, but 65% of the trading volume is by retail investors.

“There has been a paradigm shift in the investment landscape. The old guard of specialist hedge funds and sophisticated long-only asset managers have been humbled by the hordes of retail investors taking over.” - Dawn News

We aim to build a comprehensive solution that will be simple yet complete for a retail investor's needs. The tools available right now aren't complete in functionality and often use GPT's conversation feature to act as financial advisor rather than being actual experts. Moreover, these tools often lack the necessary sophistication to provide comprehensive and standardized investment guidance, particularly for public listed securities. This unmet need hinders investors from making informed financial decisions, leading to suboptimal investments, and missed opportunities.

According to cnbc 31% of investors are already satisfied with AI advice for stocks, and right now the tools are not even good enough! We aim to bridge the gap with elev8. We aim to provide a standardized elev8 report card for psx securities for now. This will be a generated report created throughout program flow, and stored for a financial quarter/year, so every next user can see it without waiting for repeated processing. Down the line we wish to cater more markets, including but not limited to international markets and crypto.

MARKET REVIEW

1. Open-source solutions:
 - = finGPT
2. Closed source solutions:
 - = FinChat.io
 - = WallyGPT
 - = Jarvis Invest
3. Projects by seniors:
 - = N/A

PROJECT DETAILS

A	<p><u>PROPOSED SOLUTION:</u></p> <p>elev8.ai will aim to solve the above-stated problem by providing sound financial advice to new and existing retail investors in a simple, straightforward manner. The tool will provide comprehensive and standardized investment guidance, particularly for public listed securities, empowering retail investors to make smart investing decisions and fully avail lucrative investment opportunities in the future.</p> <p>What makes elev8.ai different from existing solutions?</p> <p>Firstly, the tool will generate financial advice by analyzing information from a variety of sources. These include the company's reported financial figures, its actual performance, and current financial news related to the company. This ensures that the advice is reliable and accurate. In contrast, most existing tools gather information only from news and/or finance-related forums.</p> <p>Secondly, existing solutions have a complex and unfriendly user interface (UI) that can be overwhelming for new investors. With elev8.ai, we aim to make the UI as simple and user-friendly as possible to ensure a seamless and intuitive user experience. Some of the features we aim to integrate into the tool include clear navigation pathways, accessibility features, and responsive design.</p> <p>Thirdly, we aim to incorporate Machine Learning principles into our tool by making the recommendation engine improve its accuracy and performance with time. With this feature, the insights generated by the recommendation algorithm will be compared with the real-world performance of the securities in question and the algorithm will adjust/update the weights for optimized performance and better predictions. Again, this is a feature that doesn't exist in current related tools, based on our research.</p>
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	<p>[Note: <i>this is an additional/tentative feature that we plan on incorporating later; it will not be included in the initial MVP of the project. Its inclusion is subject to time, resource, and intellectual constraints]</i></p>
B	<p><u>PROJECT OBJECTIVES:</u></p> <p>Specific: Develop elev8.ai to provide comprehensive and standardized investment guidance for retail investors, particularly for publicly listed securities.</p> <p>Measurable: Achieve a minimum accuracy rate of 85% in financial advice generated by elev8.ai, measured through user feedback and performance evaluation against real-world investment outcomes.</p> <p>Achievable: Implement a user-friendly and intuitive interface, ensuring that even new investors can navigate and utilize elev8.ai effectively.</p> <p>Relevant: elev8.ai will fill the gap in the market by analyzing a variety of data sources (company financials, performance, news) to provide reliable advice, unlike existing tools that rely solely on news and forums.</p> <p>Time-bound: Integrate Machine Learning principles into elev8.ai within the first year of development, with regular updates to the recommendation engine to optimize performance based on real-world outcomes.</p>
C	<p><u>METHODOLOGY:</u></p> <p><u>Software & Tools</u> Programming Languages: Python (ML Models), JavaScript (Web/App Scripting) Machine Learning Libraries: Scikit-learn, TensorFlow, or PyTorch will be employed for building and training machine learning models.</p> <p>Web/App Development: React (Web) and React Native (Mobile App) will be used for the front-end. Express and Node for the Back-end APIs</p> <p>Database Management: We will be using relational databases management system (RDBMS) to store and manage data</p> <p>Data Collection: We will be using libraries like Beautiful Soap, Selenium etc. to scrap data from the websites and extract data</p> <p><u>Platforms & Frameworks</u> Development Frameworks: ReactJs, ReactNative, ExpressJs, NodeJs</p> <p>Cloud Services: Utilize cloud platforms like AWS or Microsoft Azure scalable and reliable web hosting, along with google developers and apple developers account to deploy our mobile app</p>

	<p>Techniques & Approaches</p> <p>Machine Learning Algorithms: We will be using algorithms like regression, classification, time-series analysis and natural language processing to analyze and predict data</p> <p>Data Integration: Train recommendation models using historical financial data to provide personalized advice</p> <p>Continuous Learning: Implement reinforcement learning techniques to allow the recommendation engine to adapt and improve over time based on real world performance</p> <p>User Interface Design: Apply concepts of HCI and implement user friendly interfaces</p> <p>Testing & Validation: Conduct rigorous testing, including unit testing, integration testing, and user acceptance testing, to ensure the system meets accuracy and performance goals</p> <p>Regular Updates: Set up a system for continuous monitoring and updating of the recommendation engine based on user feedback and evolving market conditions</p> <p><i>[Note: All the above-mentioned things are tentative and are subject to change based on the situation at hand.]</i></p>
D	<p><u>THE PRODUCT:</u></p> <ol style="list-style-type: none"> 1. Mobile & Web app 2. Reports 3. Source Code and Licensing 4. Technical Documentation 5. User Manual 6. Support and maintenance.

PROJECT MILESTONES AND DELIVERABLES

Expected Date & Time	Group Members
2023	Proposal
2023	Requirement Analysis & Specification
2023	Design System & Prototyping
2024	Implementation of a Functional and Quality - Adherent Software
2024	Final Defense with a Deploy-ed/able Software

WORK DIVISION

Tasks	Group Members
UI/UX Design & Frontend	AmanUllah Faisal
Frontend & ML Models	Ibrahim Abdul Rehman
Backend & ML Models	Syed Ali Mashoud
Backend & User Stories	Hassan Yahya

COSTING

Items	Cost
Hardware and Software	PKR 50,000 - 100,000
Data Acquisition	PKR 10,000 - 20,000
Development Resources (Cost of books, online courses, or tutorials.)	PKR 5,000 - 10,000
Hosting and Domain	PKR 5,000 - 10,000
Printing and Presentation	PKR 5,000 - 10,000
Travel and Meetings (Expecting weekly or fortnightly meetings with mentors at their office.)	PKR 2500 * 3 times per month * 8 months = PKR 60,000
Prototype Testing (Cost of user recruitment and incentives.)	PKR 10,000 - 20,000

Miscellaneous Expenses (A buffer for unforeseen expenses.)	PKR 5,000 - 10,000
Conference or Presentation Fees (If applicable.)	PKR 2,000 - 5,000
Contingency Fund (For unexpected expenses.)	PKR 5,000 - 10,000
Total estimated cost	PKR 157,000- PKR 255,000

REFERENCES