elev8.ai

elevate your finance game.

GitHub Repository: https://github.com/Samash1129/Final-Year-Project

System Requirement Specification

(Semester 7)

Syed Ali Mashoud – 23068
AmanUllah Faisal – 22944
Hassan Yahya – 22965
Ibrahim Abdul Rehman – 22748

Supervisior: Mr. Behraj Khan
Mentor: Mr. Raheel Siddiqui (VP Product Sales - Systems Limited)

Submitted to Projects Manager- FYP

IBA SMCS
School of Mathematics and Computer Science

PROBLEM STATEMENT

The retail investment landscape, especially in Pakistan's PSX, is witnessing a surge in new and unguided investors seeking reliable financial advice. Despite the increase in access to security markets, many investors express dissatisfaction with existing AI-based advisory tools. Currently, only 31% of investors globally are satisfied with AI advice, highlighting a significant gap in the market.

In Pakistan, retail investors contribute substantially to daily market trading, constituting about 25%, with an expected increase as PSX opens directly to retail investors. This shift is reshaping the investment landscape, with retail investors playing a more prominent role in trading volume (65%) compared to institutional investors. The goal is to address this unmet need and build a comprehensive solution named "elev8" to cater to retail investors' financial advisory needs.

The current AI tools often lack sophistication and completeness in functionality, relying on conversational features rather than offering expert-level guidance. The aim is to provide a standardized elev8 report card for PSX securities, generated throughout the program flow and stored for a financial quarter or year. This approach enables subsequent users to access comprehensive reports without repeated processing delays. The long-term vision includes expanding the platform to cover international markets and cryptocurrencies, bridging the gap in AI-based stock advice tools.

SYSTEM REQUIREMENTS

1. **Functional Requirements**
   - I. The system shall allow users to create an account to use our product.
   - II. The system shall generate a prompt after login and asks the user about his preferences on the type of stocks the user want to see or wants the system to analyze and present the user.
   - III. The system shall ask the user about more details so that a precise deduction can be made.
   - IV. The system shall check the database if the data regarding the asked security is present or not to reduce the time for analyzing and creating a report at that time.
   - V. The system shall analyze the data extracted by using the machine learning model and display it according to the needs of the user.
   - VI. After analyzing, the system shall be able to generate a detailed/brief report based on the analyzed data by using one of the large language models (only used for report generation).
   - VII. The system shall have a paid version in which the user can interact with the language model to gain information regarding the selected security.

2. Non-functional Requirements

I. Safety: The system doesn't allow multiple users to login at the same time on the same machine

II. Security: Protected routing based on session management/tokens will be implemented so that unauthorized users cannot access another user's account even after getting the URL.

III. Software Quality Attributes:

i. Availability: this software will be available to anyone who has access to the internet.

ii. Portability: the software is built using JavaScript (MERN) as JavaScript has easy integration with ML models (in Python).

iii. Usability: the product will have a user-friendly interface so that any user can access the product easily.

3. User Interface Requirements

I. Sign In/Sign Up Page: This page allows the users to either login to their existing account or create a new account (third party authentication may also be used).

II. Preference Page: This page has multiple options from which the user can select his preference so that later the user can receive the stock recommendation based on the preferences.

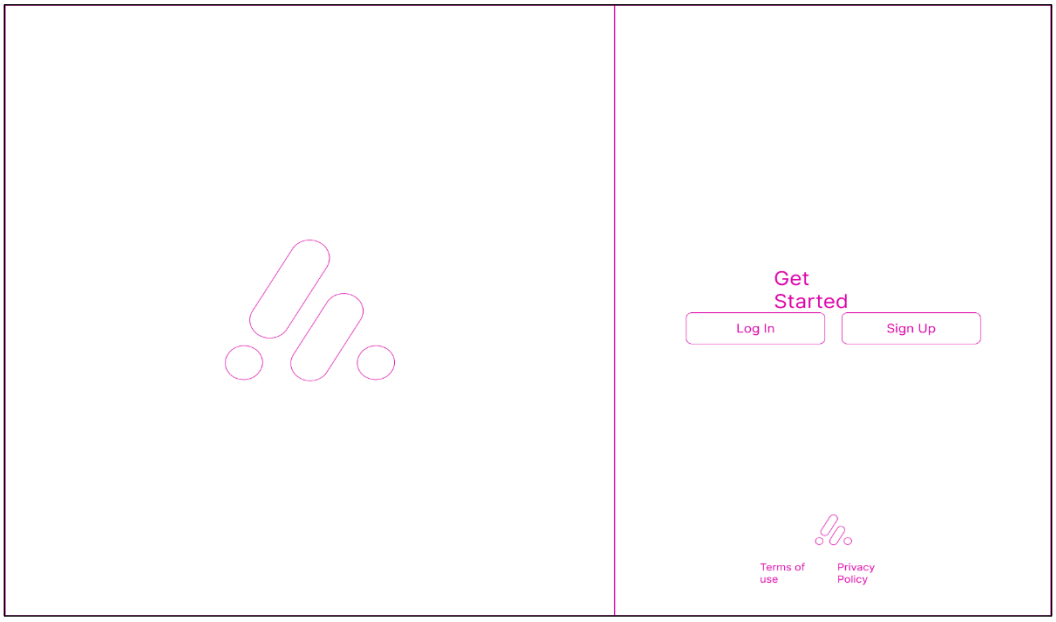
III. Dashboard:

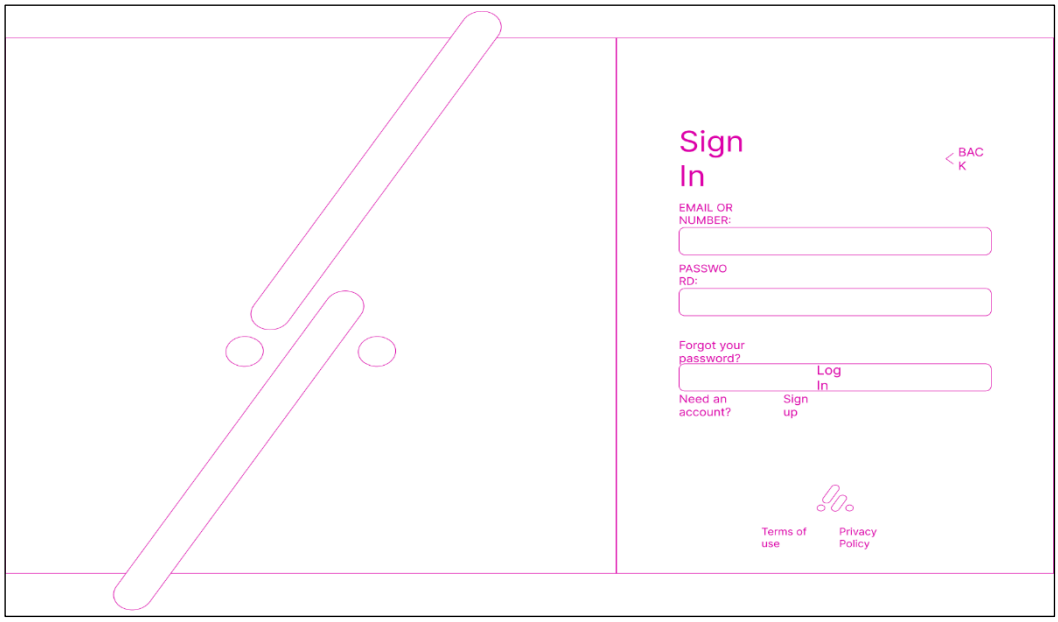
i. Here the user can check for different stocks, select any of the recommended stocks, select any of the recommended stocks provided by our model working at the backend.

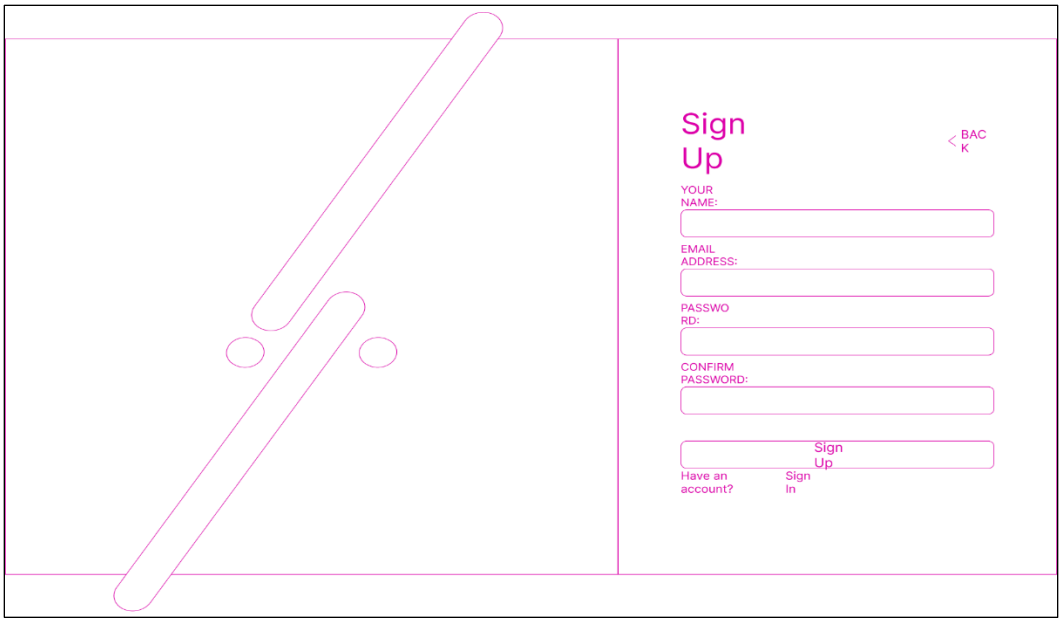
ii. After selecting any of the stocks from the provided recommendations, the information regarding the stock is shown in a separate section that will be used to generate a text using a language model – Llama or GPT

iii. Premium users will have the option to chat with our language model to get more information regarding the selected stock.

Below are the wireframes for our project.




Sign In
< BAC K
EMAIL OR NUMBER:
PASSWO RD:
Forgot your password?
Log In
Need an account?
Sign up
Terms of use
Privacy Policy


Sign Up
< BAC K
YOUR NAME:
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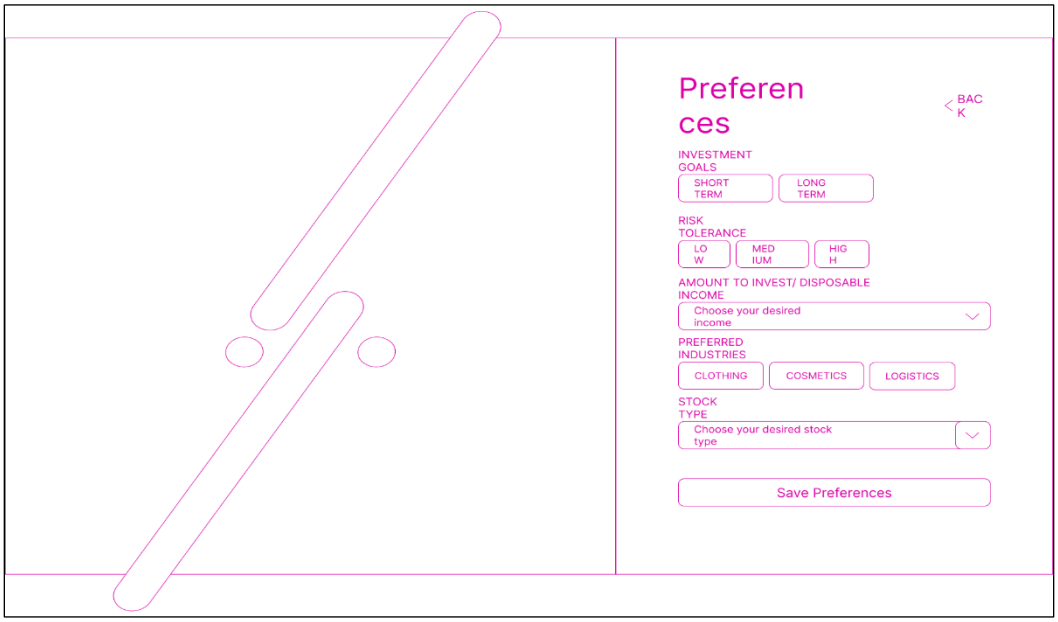
CONFIRM PASSWORD:
Sign Up
Have an account?
Sign In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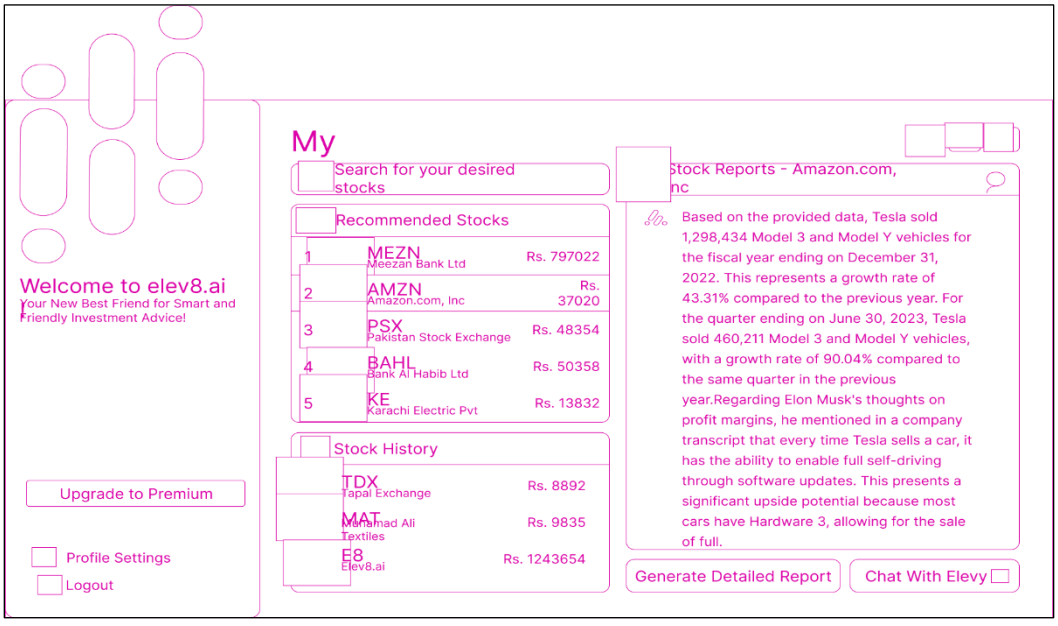
type
Save Preferences


My
Search for your desired
stocks
Recommended Stocks
1
MEZN
Meezan Bank Ltd
Rs. 797022
2
AMZN
Amazon.com, Inc
Rs.
37020
3
PSX
Pakistan Stock Exchange
Rs. 48354
4
BAHL
Bank Al Habib Ltd
Rs. 50358
5
KE
Karachi Electric Pvt
Rs. 13832
Stock History
TDX
Tapal Exchange
Rs. 8892
MAT
Muhamad Ali
Textiles
Rs. 9835
E8
Elev8.ai
Rs. 1243654
Welcome to elev8.ai
Your New Best Friend for Smart and
Friendly Investment Advice!
Upgrade to Premium
Profile Settings
Logout
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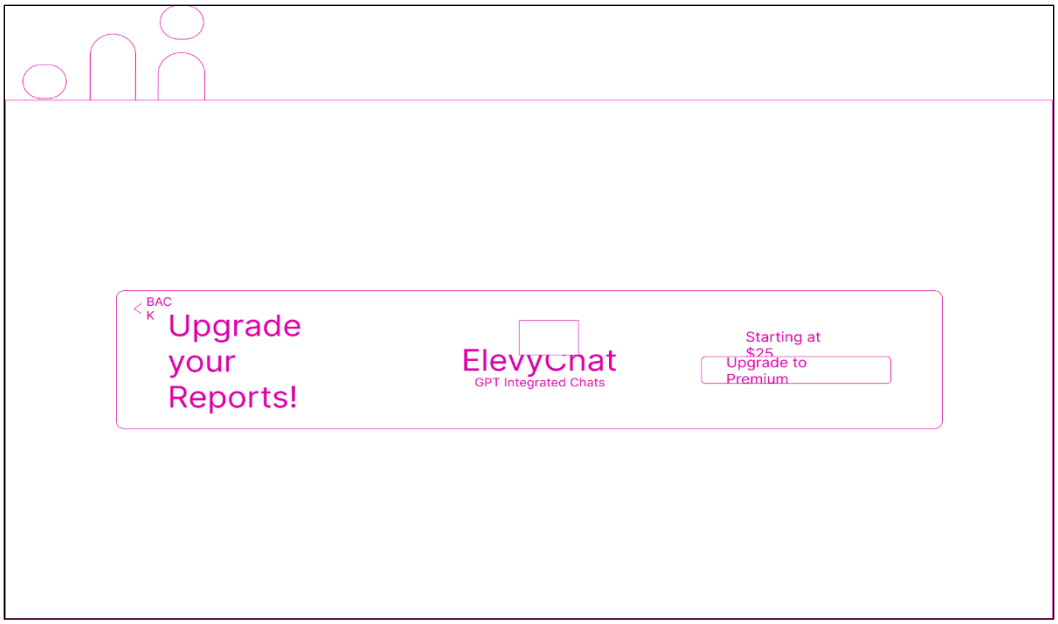
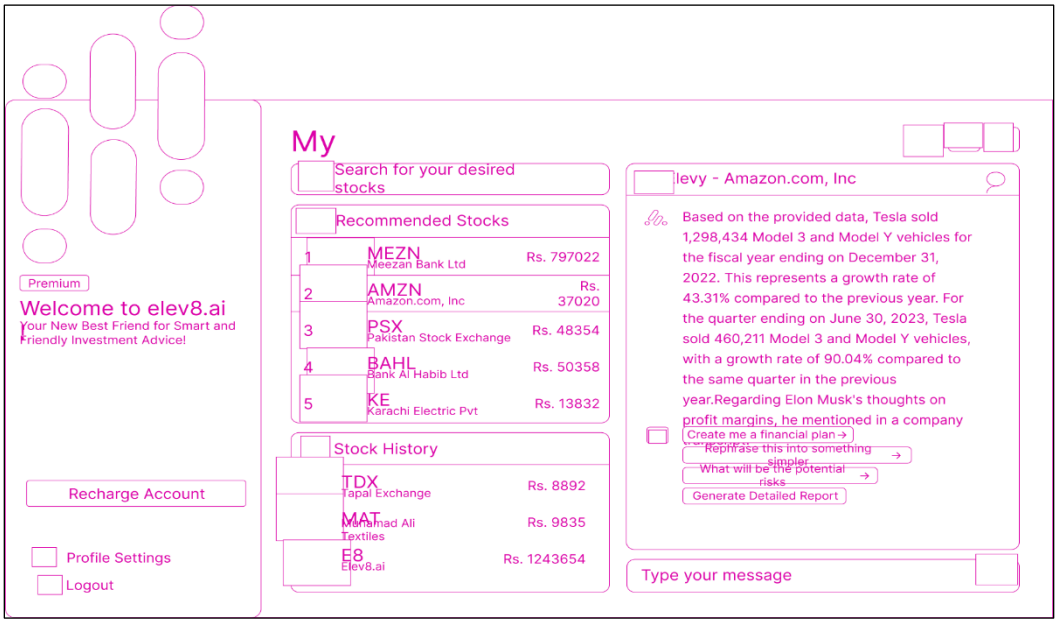
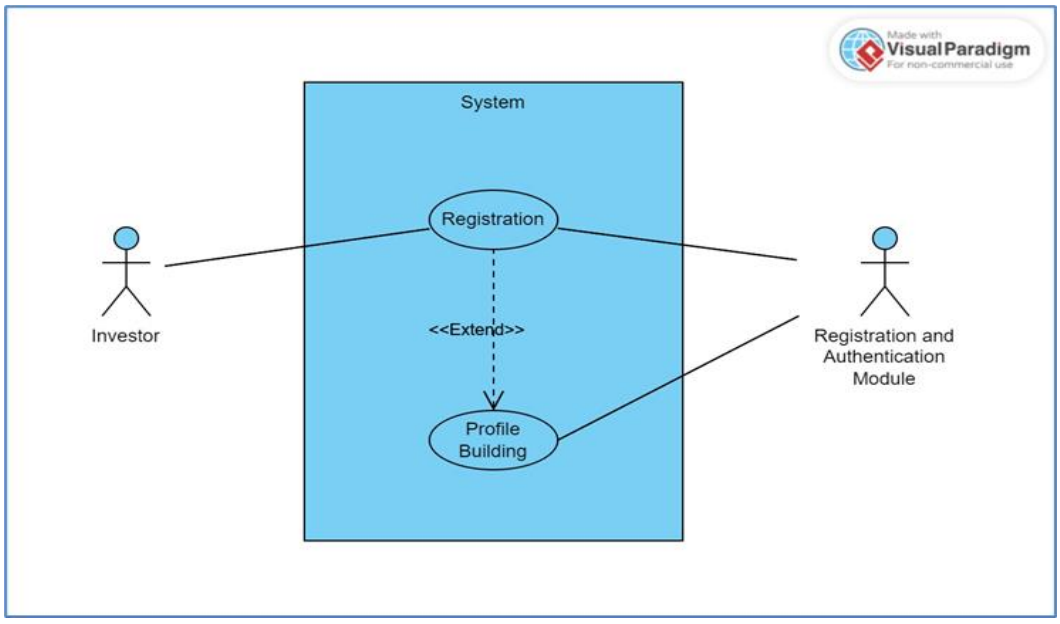
nc
Based on the provided data, Tesla sold
1,298,434 Model 3 and Model Y vehicles for
the fiscal year ending on December 31,
2022. This represents a growth rate of
43.31% compared to the previous year. For
the quarter ending on June 30, 2023, Tesla
sold 460,211 Model 3 and Model Y vehicles,
with a growth rate of 90.04% compared to
the same quarter in the previous
year.Regarding Elon Musk's thoughts on
profit margins, he mentioned in a company
transcript that every time Tesla sells a car, it
has the ability to enable full self-driving
through software updates. This presents a
significant upside potential because most
cars have Hardware 3, allowing for the sale
of full.
Generate Detailed Report
Chat With Elevy


BAC
K
Upgrade your Reports!
Elevychat
GPT Integrated Chats
Starting at $25
Upgrade to Premium


Premium
Welcome to elev8.ai
Your New Best Friend for Smart and Friendly Investment Advice!
Recharge Account
Profile Settings
Logout
My
Search for your desired stocks
Recommended Stocks
1 MEZN Meezan Bank Ltd Rs. 797022
2 AMZN Amazon.com, Inc Rs. 37020
3 PSX Pakistan Stock Exchange Rs. 48354
4 BAHL Bank Al Habib Ltd Rs. 50358
5 KE Karachi Electric Pvt Rs. 13832
Stock History
TDX Tapal Exchange Rs. 8892
MAT Muhammad Ali Textiles Rs. 9835
E8 Elev8.ai Rs. 1243654
levy - Amazon.com, Inc
Based on the provided data, Tesla sold 1,298,434 Model 3 and Model Y vehicles for the fiscal year ending on December 31, 2022. This represents a growth rate of 43.31% compared to the previous year. For the quarter ending on June 30, 2023, Tesla sold 460,211 Model 3 and Model Y vehicles, with a growth rate of 90.04% compared to the same quarter in the previous year.Regarding Elon Musk's thoughts on profit margins, he mentioned in a company
Create me a financial plan →
Rephrase this into something simpler →
What will be the potential risks →
Generate Detailed Report
Type your message

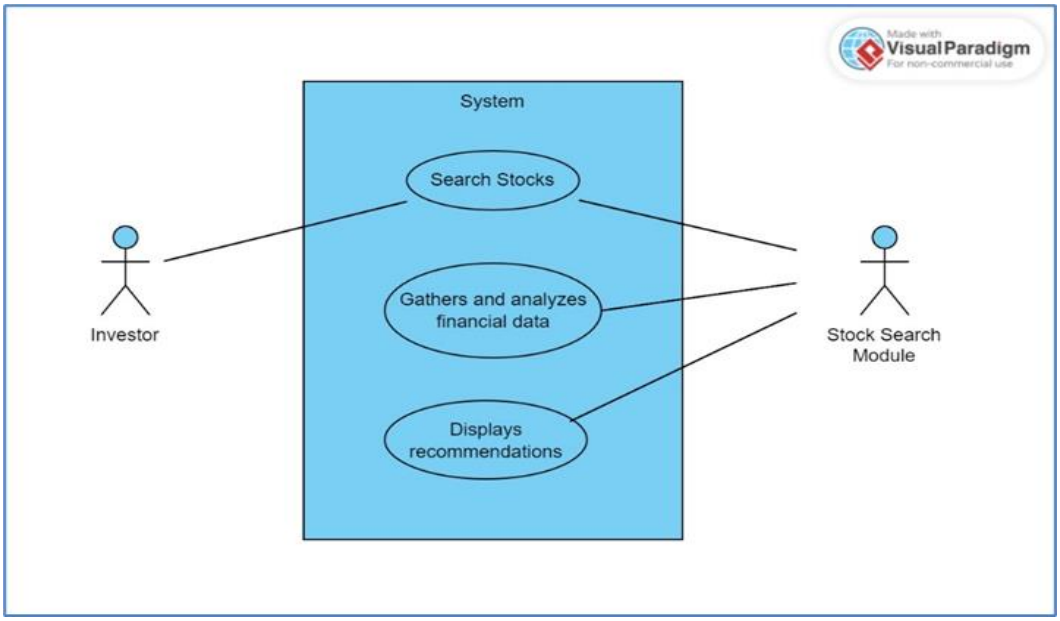
FUNCTIONAL REQUIREMENTS SPECIFICATION

1. **Stake Holders**
   I. Beginner/Naïve retail investors
   II. Intermediate or experienced retail investors
   III. Administrators
2. **Actors and Goals**
   I. User: can create account, login into his account, add/update preferences, and view reports.
   II. System: Analyze data, generate reports, ensure secure access.
3. **Use Cases**
   I. User Registration and Profile Creation
      i. New Users can create an account or register.
      ii. Users create profiles, providing information about their investment goals and risk tolerance.



   II. Stock Selection and Generated Recommendations
      i. Users can search for publicly listed stocks by name or ticker symbol.
      ii. The tool retrieves and analyzes financial data, including annual financial statements and stock performance, for the selected stock.

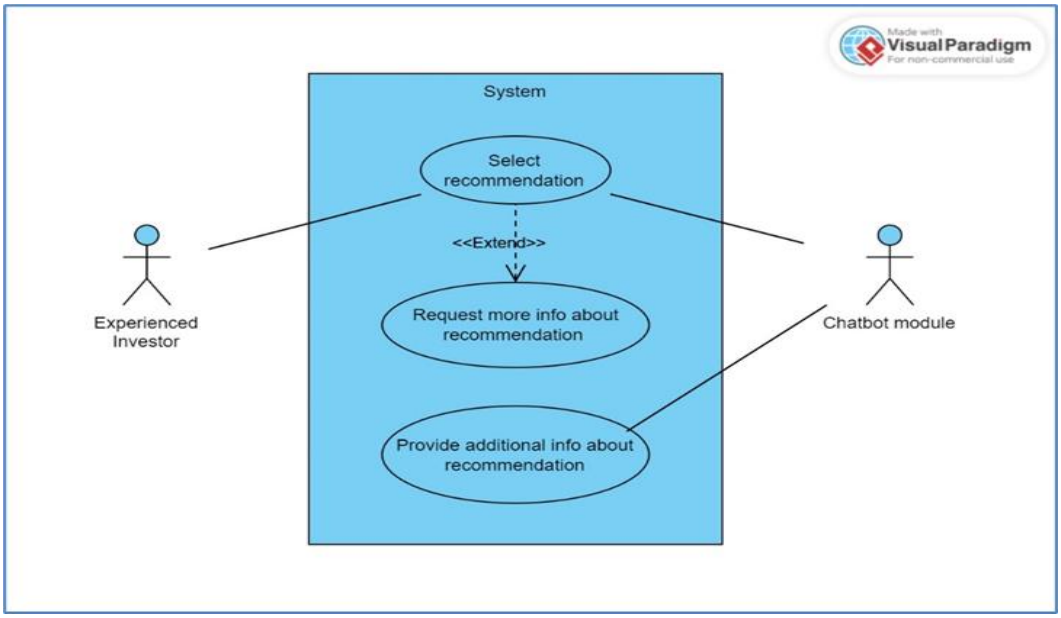
iii. After analyzing the stock, the tool generates a recommendation for the stock, advising whether is it a good investment based on their investor profile and the stocks analysis.



III. Chatting with chatbot (Premium User)

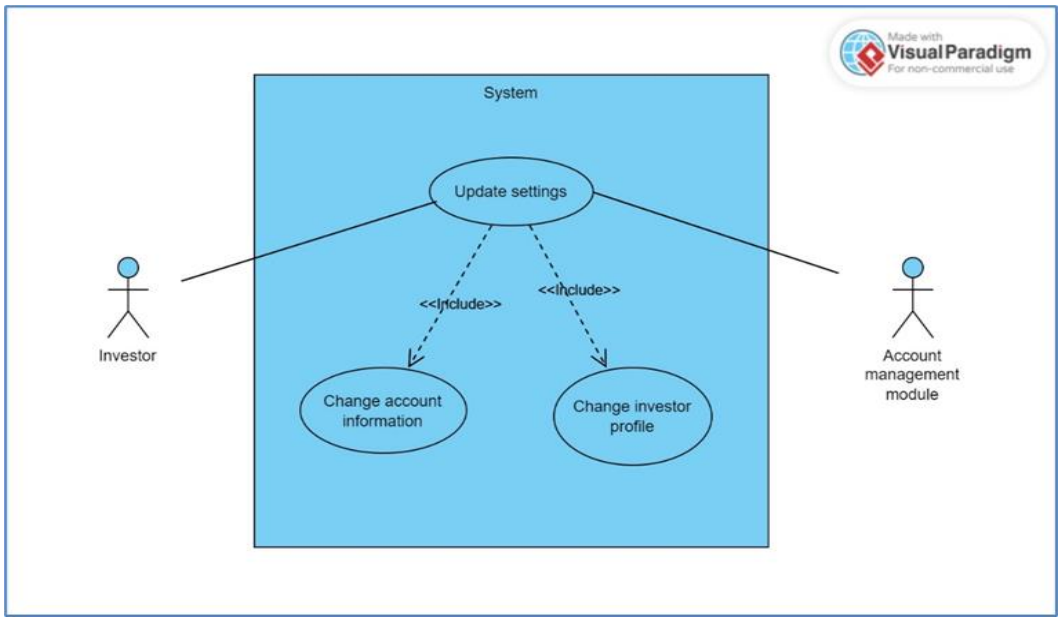
i. Experienced investors can talk to a chatbot regarding an investment recommendation for a stock.

ii. The chatbot can provide additional information behind its recommendation as well as the stock in question.



IV. User Account Management

i. Users can update their profiles, including changing investment goals or risk tolerance.



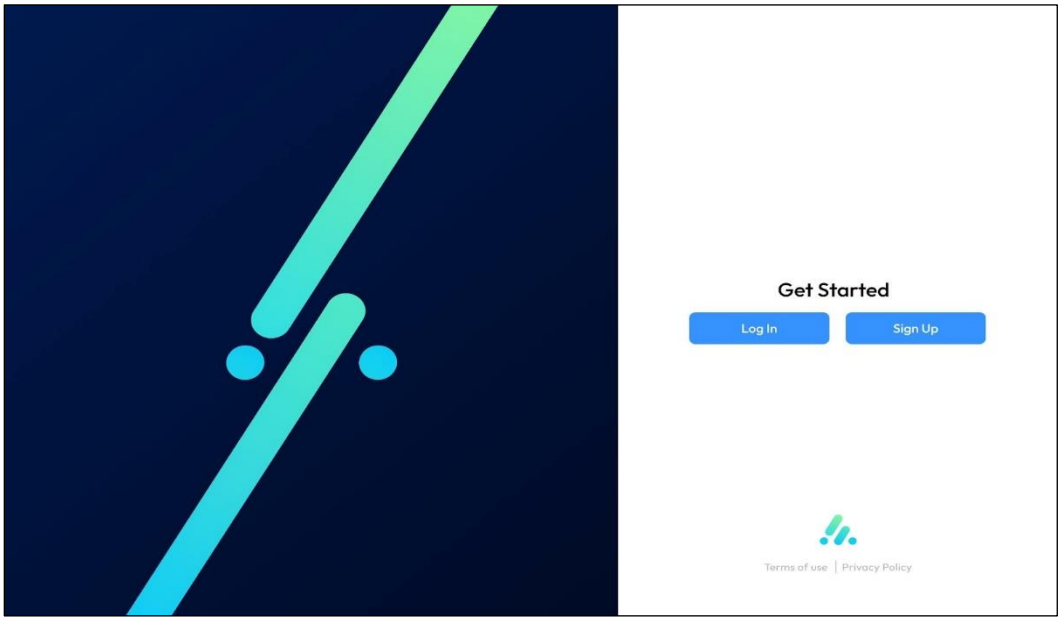
USER INTERFACE SPECIFICATION

Project will be built using the MERN stack and will need a scorn job tool.

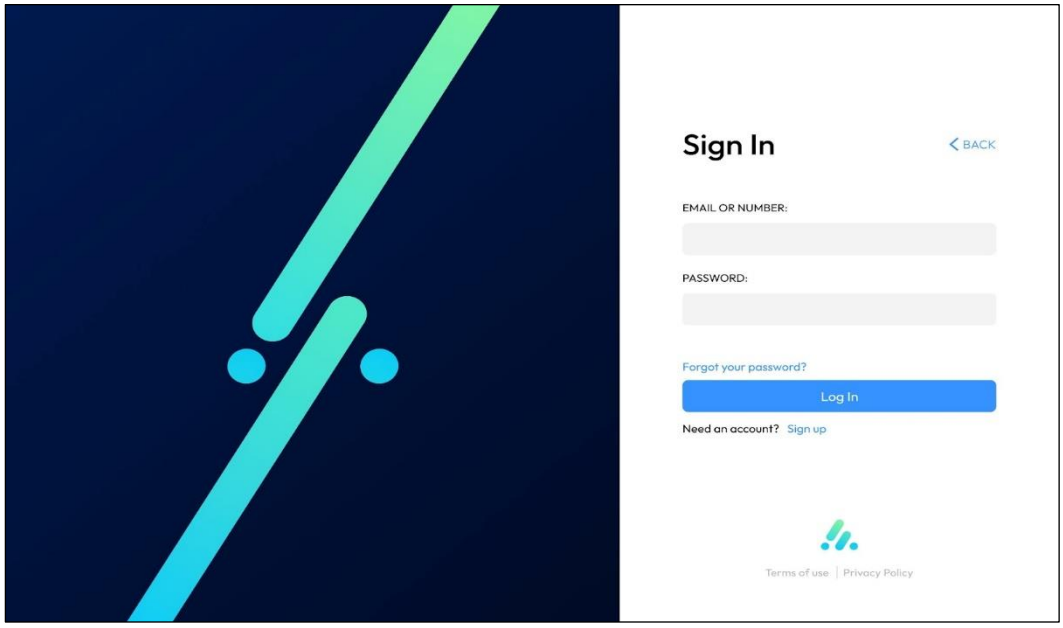
1. **Getting Started:**

This portion of our UI involves Sign In with your existing account or Sign Up for a new account and login to our Main Dashboard. You can make a new account by simply entering your name, email address, and a secure password which further leads to the preferences you want to set for report generation.

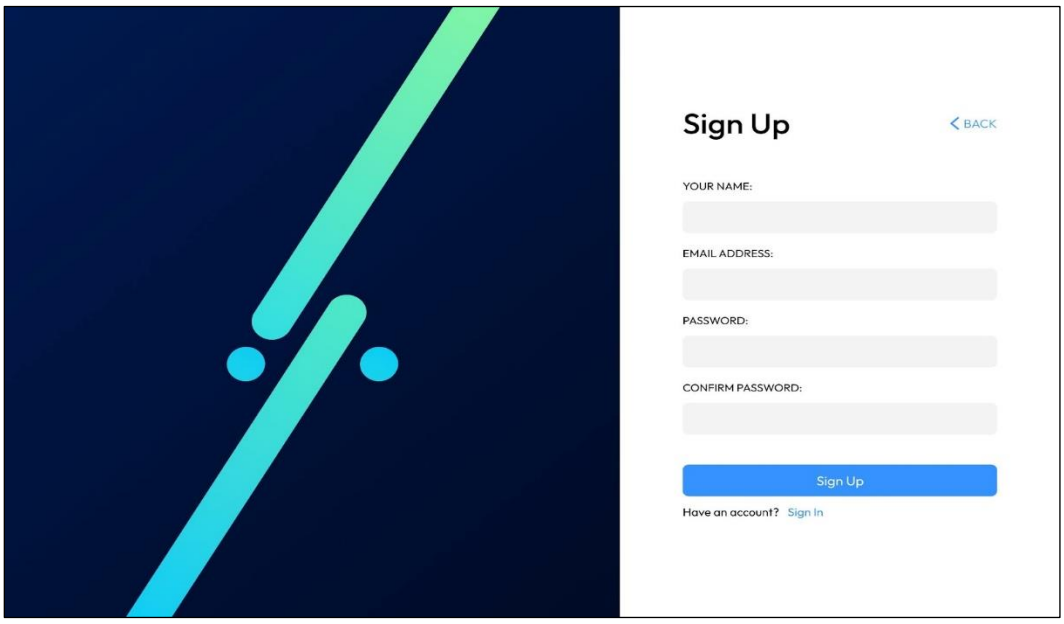
I. Landing Page



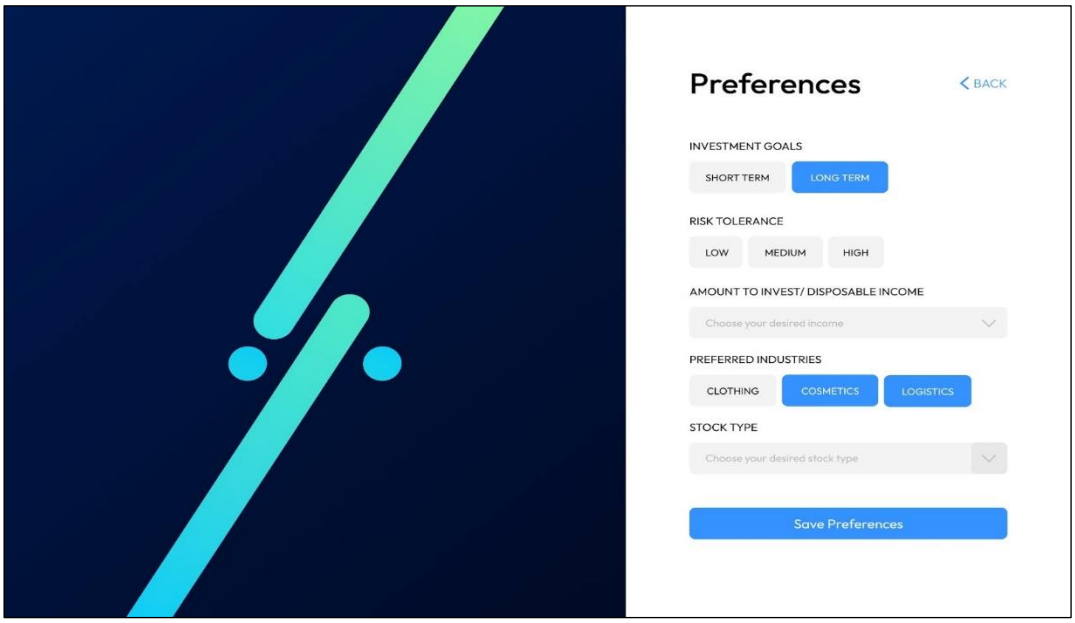
II. Sign In Page



III. Sign Up Page



IV. Preference Page



2. Main Dashboard:

This portion of our UI revolves around how you can generate stock reports within a few clicks.

I. Main Dashboard Page

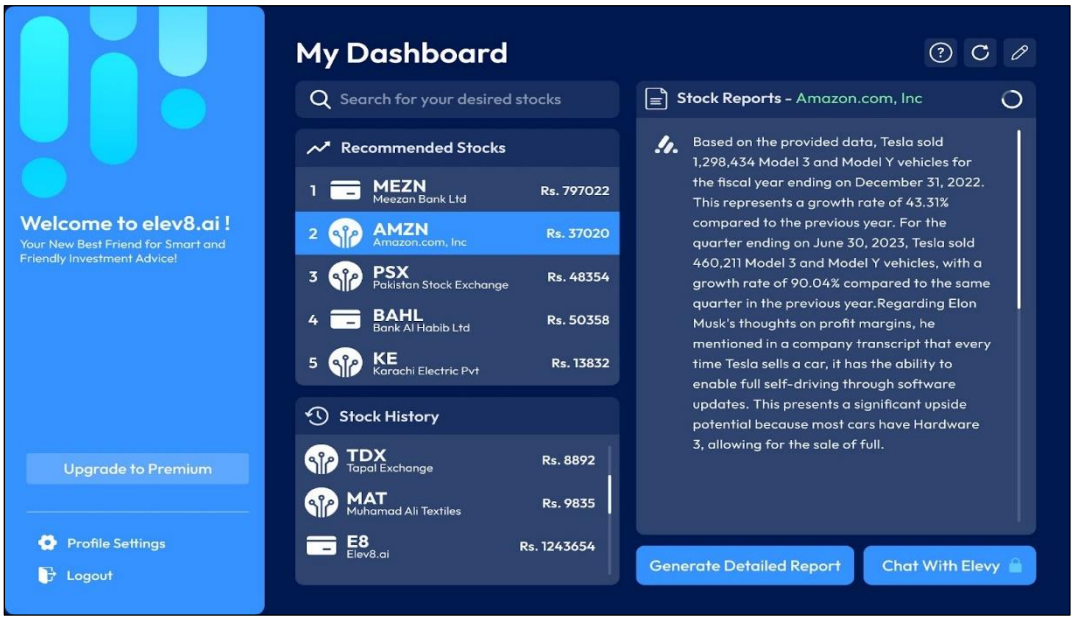
i. On the left side of your dashboard, you see a welcoming message and 3 buttons. Upgrade to premium opens a prompt where it guides with the benefits of our premium plan and purchasing cost.

ii. Profile Settings takes you where you can edit your account details and preferences.

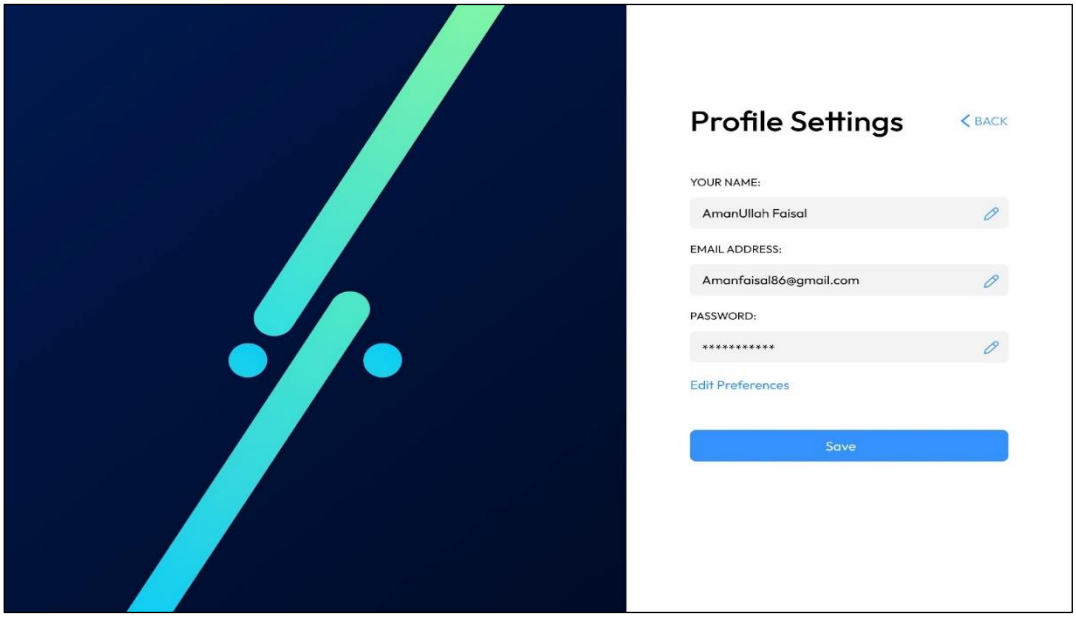
iii. Logout simply logs you out of the site.

iv. In the center of the screen, you can find a search bar where you can find all the stocks according to user preferences and the history of previous stocks searched by the user.

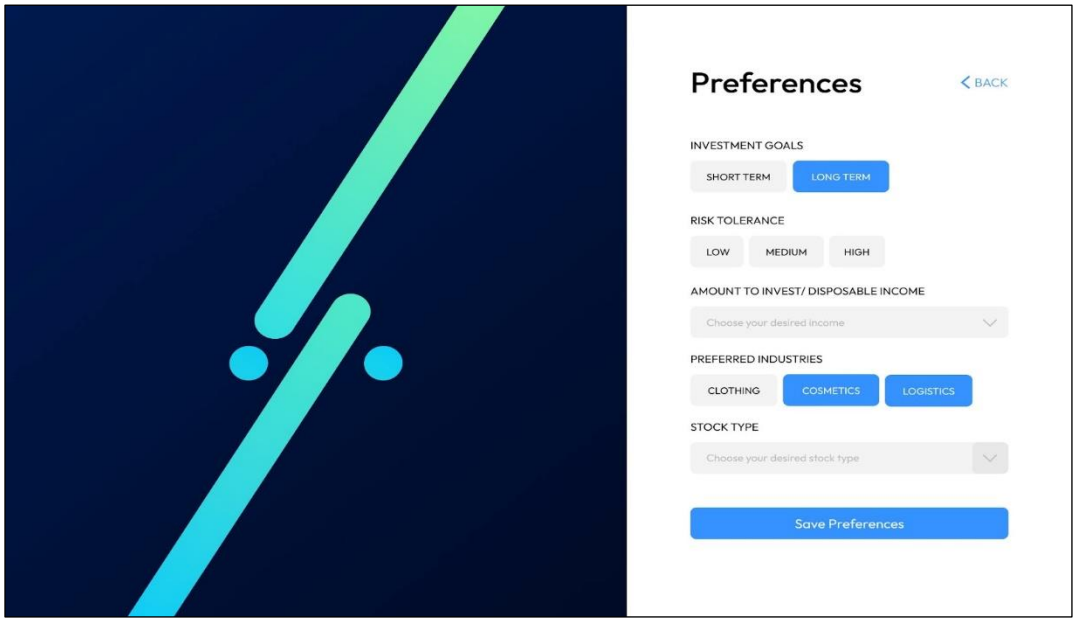
v. Amongst them you choose one which takes you to the third and right portion of the screen, where the report of your chosen stock starts to generate. The report you see on your screen gives you a basic overview whereas if you click on the generate detailed report, it downloads a PDF file where you get detailed insights of the stock with a recommendation of buying it or not. Or you can even talk with our AI bot → 'Chat with Elevy' which is an integration of your reports with GPT-4, which transforms your reports into a powerful decision (Only available for premium user).



II. Profile Settings Page

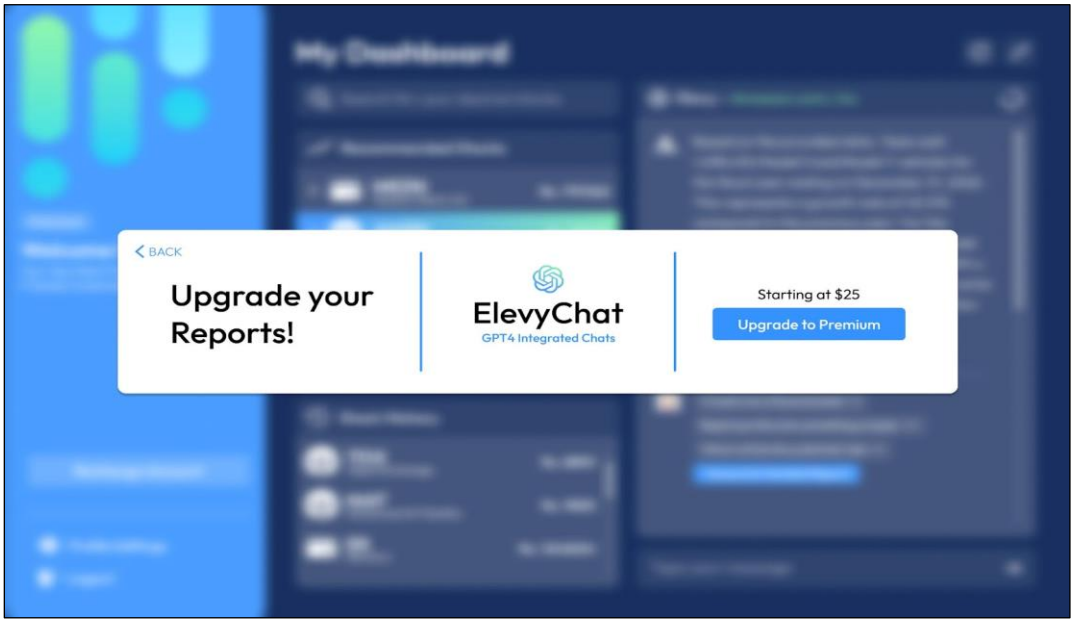


III. Update Preference Page



3. Purchasing Premium:

This portion of the UI involves viewing our premium plan and purchasing. (one time purchase)

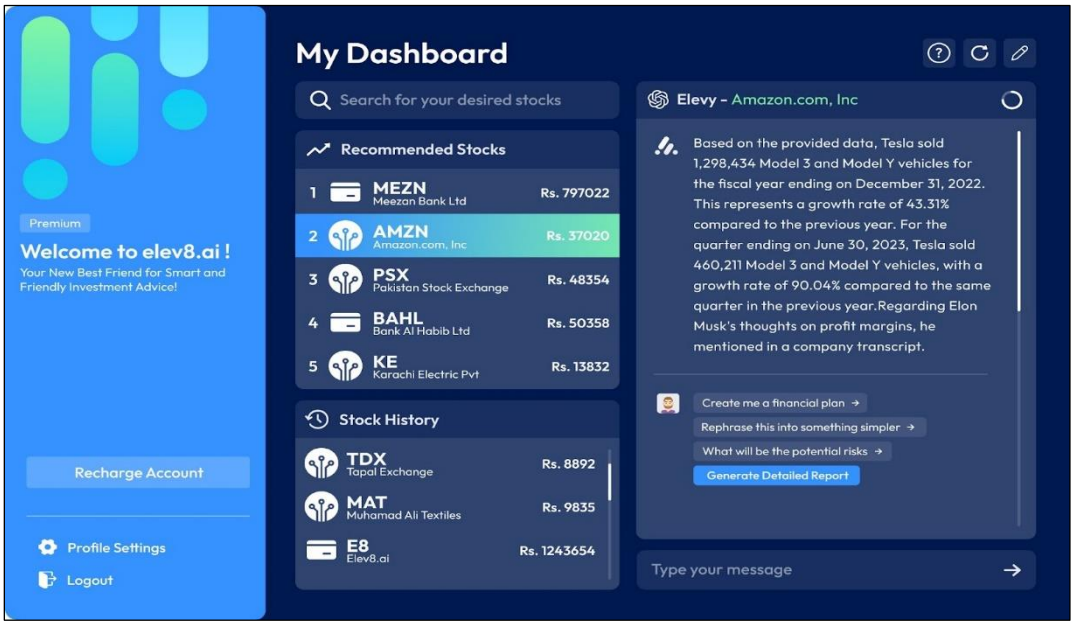


4. Premium Main Account:

I. Dashboard

i. A few clicks and get more powerful insights with our very own chatbot → 'Elevy'. On the left side of your dashboard, you see a welcoming message and 3 buttons. Recharge Account opens a prompt where it guides you with the monthly plan the user has and remaining days of the plan and if he wants to extend.

ii. Profile Settings takes you where you can edit your account details and preferences.

iii. Logout simply logs you out of the site.

iv. Then in the center of the screen you can find our search bar where you can find all the stocks registered to PSX. And once you leave that, it also shows the recommended stocks according to user preferences and the history of previous stocks he once searched.
v. Amongst them you choose one which takes you to the third & right portion of the screen, where the report of your chosen stock starts to generate. The report you see on your screen gives you a basic overview whereas if you click on the generate a detailed report, it downloads a PDF file where you get detailed insights of the stock with a recommendation of buying it or not.
vi. Or you can even talk with our AI bot -> 'Chat With Envy' which is an integration of your reports with GPT-4, which transforms your reports into powerful decisions. Now you can actually talk with your reports and ask about GPT's own recommendation and deep insights.
vii. This UI has a recharged look, like if you see some colors pop which makes the user feel more confident and powerful.