

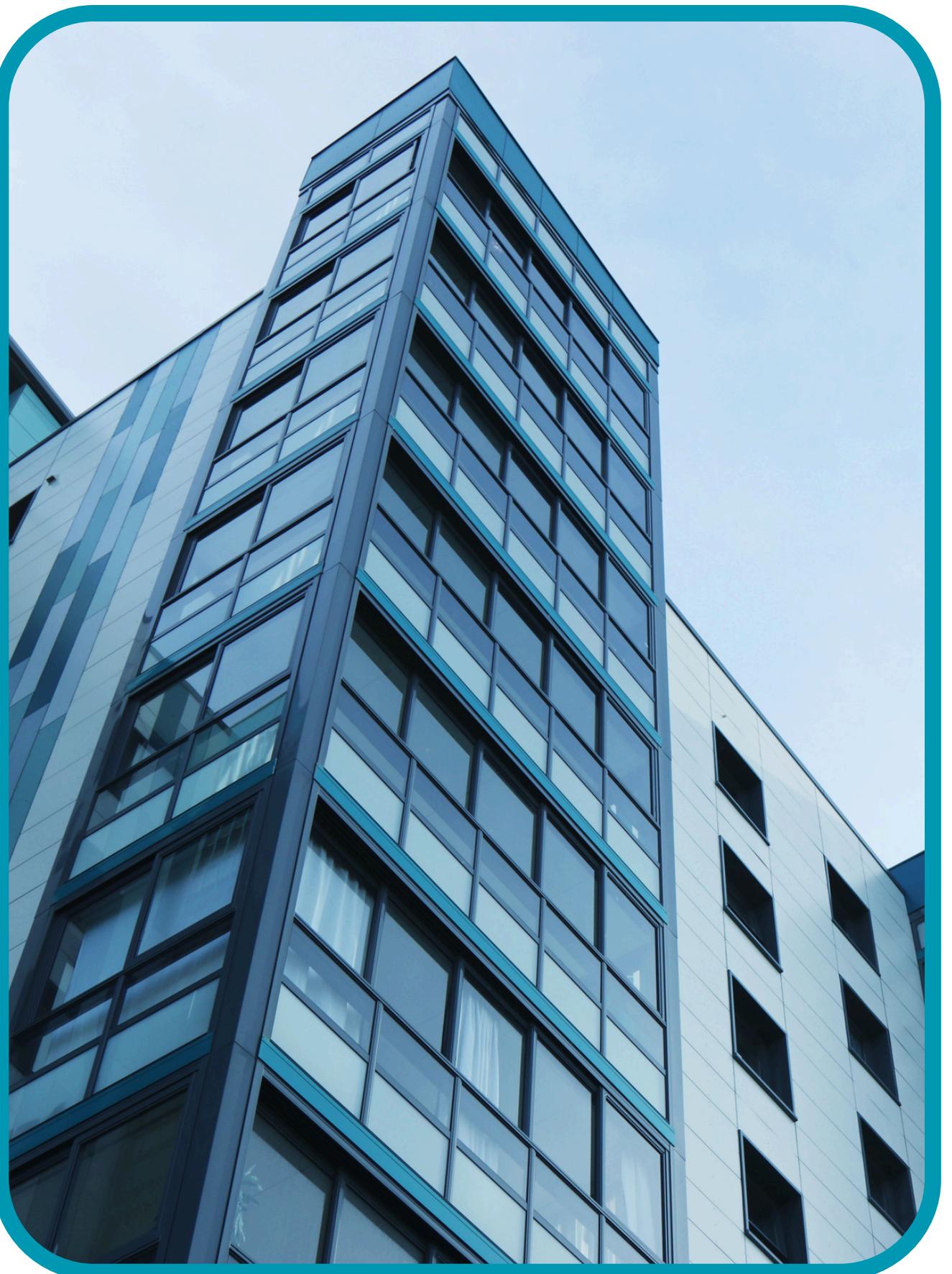
# **GEN AI PROJECT**

# **FINANCIAL BOT DEVELOPMENT**

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# OBJECTIVES & CHATBOT GOAL'S

- Developed a chatbot to offer financial advice inspired by the principles and lessons from the book Rich Dad Poor Dad by Robert T. Kiyosaki.
- Provided practical, actionable financial guidance to users.
- Simplified complex concepts from the book into clear, accessible chatbot interactions.
- Motivated users to adopt better financial habits and a wealth-building mindset.



# CHALLENGES & SOLUTIONS

## Challenges

- Time management due to the time spend to debugging the best environment (In total, were deleted 6x the wrong environment, before the right one be working).
- Understand the Chatbot Workflow and NLP aproach for this project.



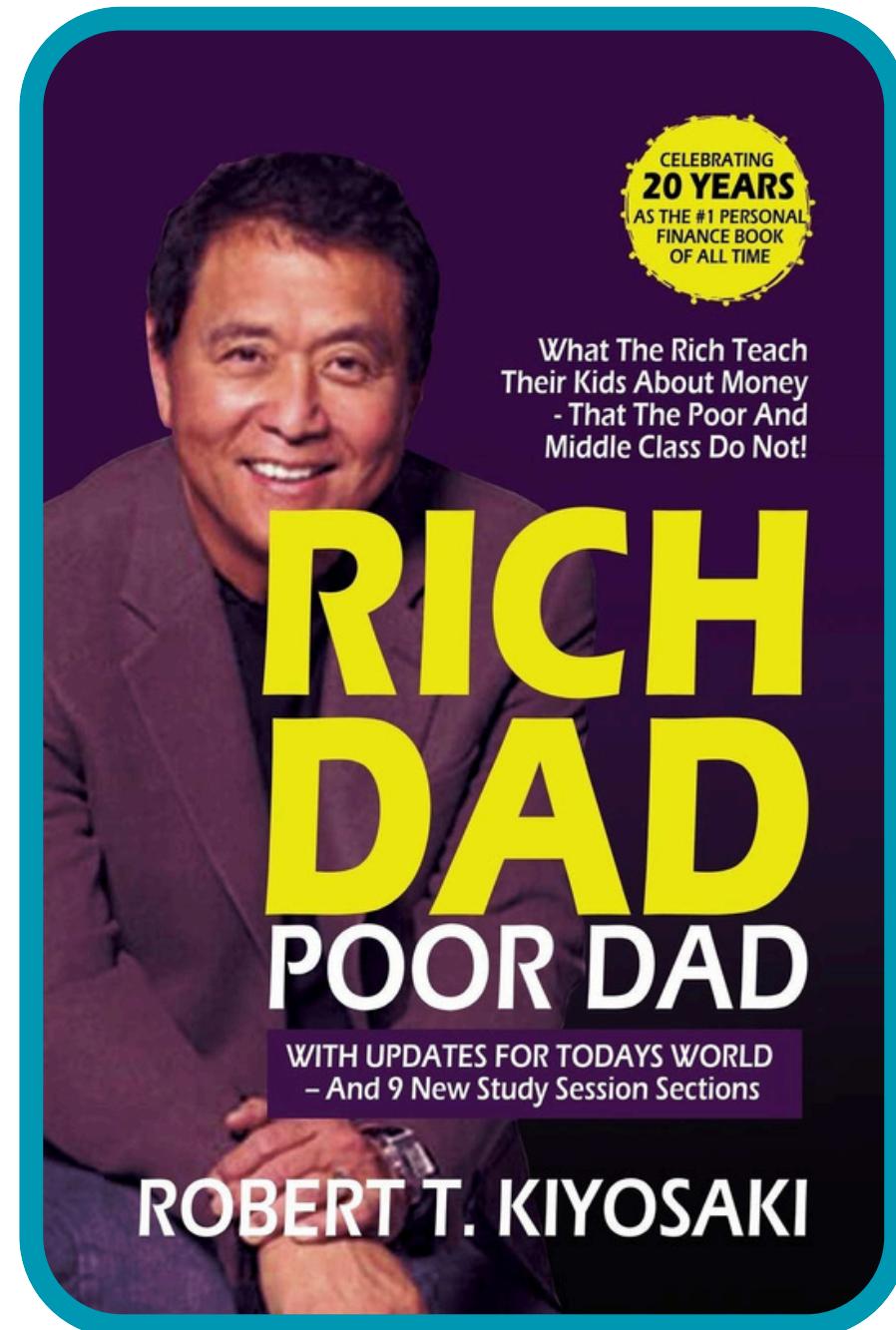
## Solutions:

- **Focusing on the Driving Questions when building the Chatbot:** What I want to achieve with this bot? It just Finacial advises based on the book or I want to aplied this to real life cenarios, where people can conect and think on both perspectives from the book?
- **Debugging with others team's,** using the resources availables to increase the workflow of the project to **conect the bot with a large audience.**

# BOOK OVERVIEW

## About the Book

- Rich Dad Poor Dad by Robert T. Kiyosaki is a personal finance book contrasting the mindsets of the Rich Dad and Poor Dad.
- It teaches how to build wealth through investments, acquiring assets, and financial literacy.
- The book challenges traditional beliefs about job security and saving, encouraging readers to escape the rat race and achieve financial independence.



# CONVERSATION FLOW DESIGN

## Driven Points

- Presented both the Rich Dad and Poor Dad perspectives impartially, allowing users to reflect on which mindset aligns with theirs, without influencing their choice.
- Define the target audience for the chatbot and tailor the content to meet their specific needs and knowledge level, ensuring relevance and engagement.
- Structure the conversation flow to guide users clearly and effectively, explaining concepts in a simple and concise manner.



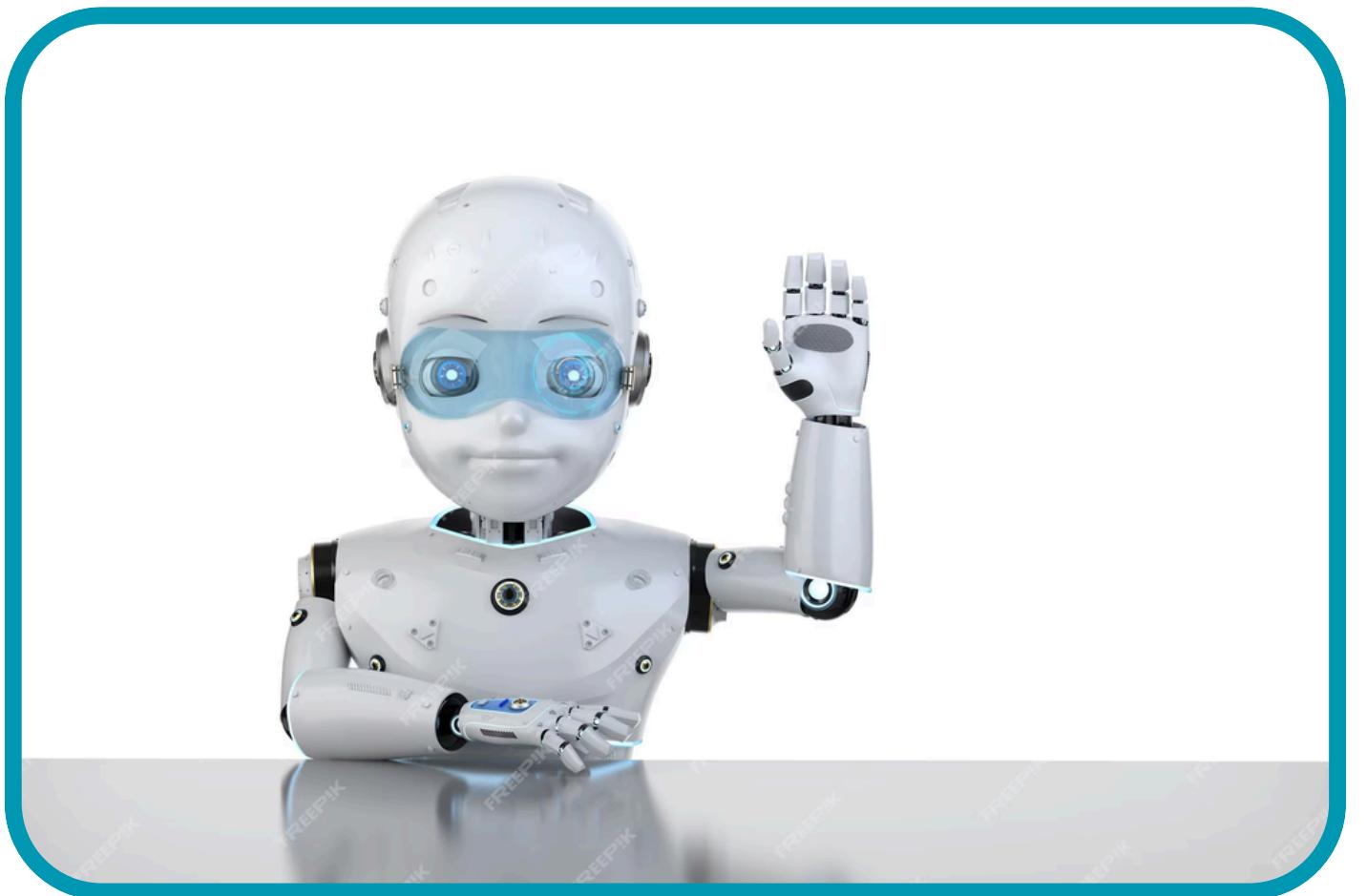
# PLATFORM SELECTION

- Deployed the chatbot on Streamlit for interactive web-based functionality.
- Integrated the chatbot with Streamlit components (text inputs, buttons, responses).
- Optimize the user interface for a smooth, engaging experience.



# CHATBOT DEVELOPMENT BOT TYPE

Build an AI-powered chatbot using OpenAI and NLP for dynamic, context-based responses.



# CHATBOT DEVELOPMENT ETL

## Extract and Preprocess Data:

Extracted the content of the Rich Dad Poor Dad PDF, then split the text into smaller chunks to facilitate efficient preprocessing and handling.

## Setup Chroma DB and OpenAI Embedding Model:

Accessed the OpenAI API key and initialized the Chroma DB client, which stores vectorized data in the chromadb directory for fast retrieval and comparisons.

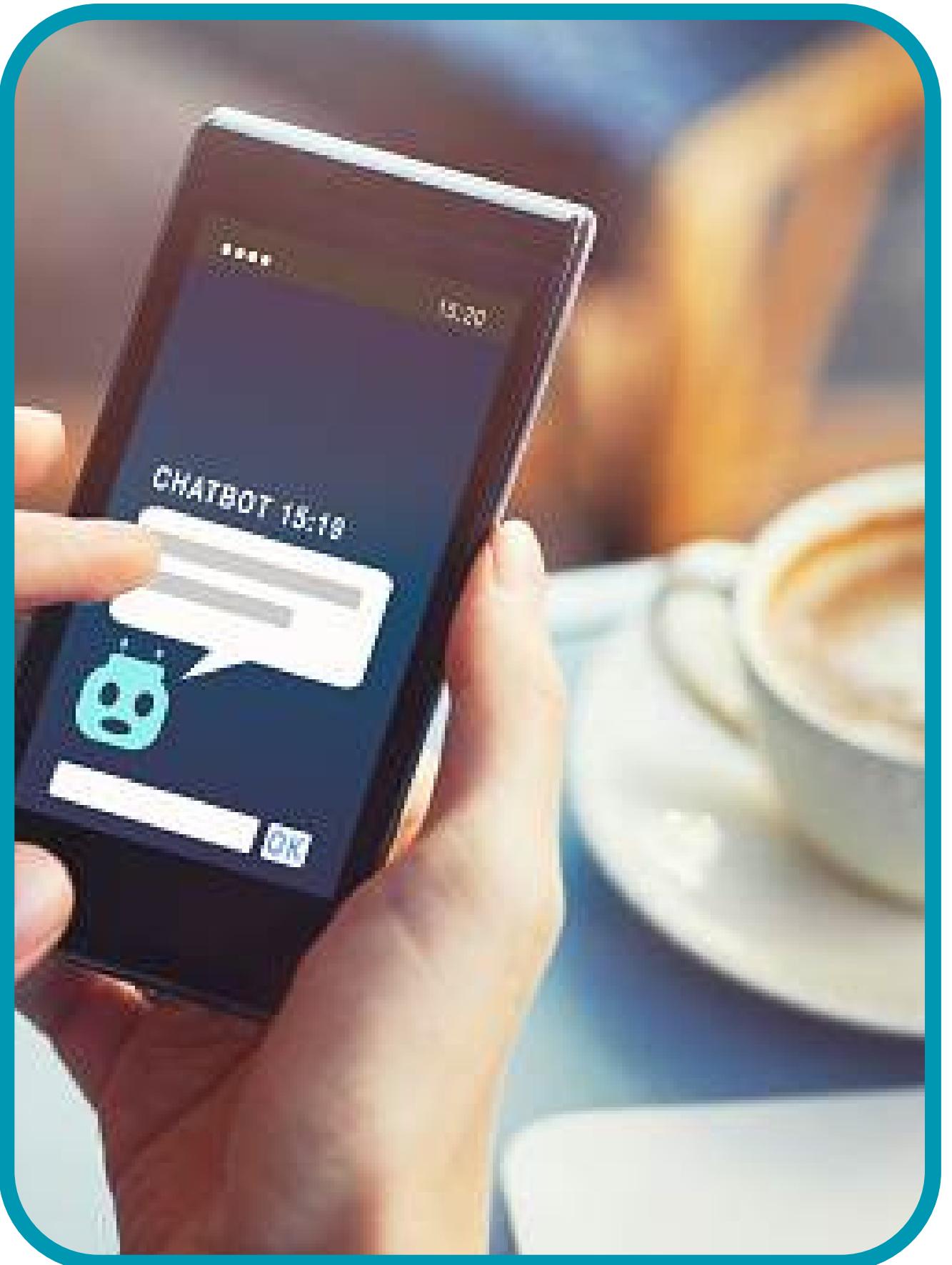
## Define Embeddings for Text Representation:

Used the OpenAI embeddings model to convert text into numerical vector representations (embeddings).



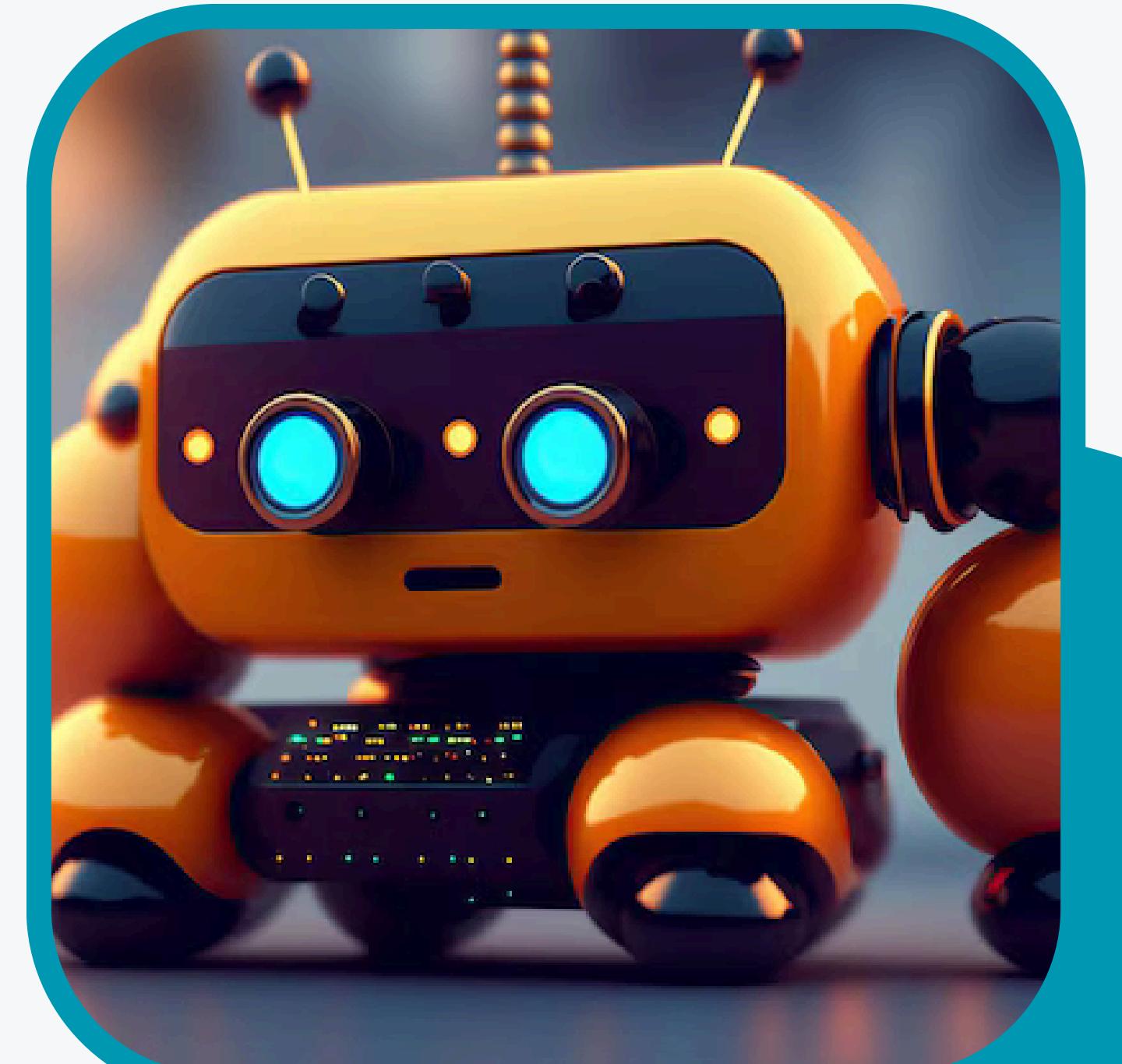
# CHATBOT DEVELOPMENT SYSTEM ARCHITECTURE

- **User's Question:** Save the user's question in a variable.
- **Find Relevant Information:** Use a search function to find the top 5 most relevant documents based on the user's question.
- **Organize the Information:** Create a formatted string with the relevant content to give to the chatbot.
- **Generate the Response:** Provide the formatted information to the chatbot to help it generate an answer based on the retrieved content.



# CHATBOT DEVELOPMENT NLP & PROMPT ENGINEERING

- **Role of the Chatbot:** The bot is designed to give financial advice based on Rich Dad Poor Dad.
- **User Interaction:** The user asks a question, and the bot answers using the book's content.
- **Context Provided:** The bot is given key sections from the book to use as reference.
- **Response Guidelines:** The bot follows clear rules to ensure accurate, clear, and unbiased answers. It explains both perspectives (Rich Dad vs. Poor Dad), compares them, and gives an analogy to make it easier to understand.
- **Response Format:** The answer is structured in an organized way: title, user's question, the answer, a comparison of perspectives, an analogy, and the book reference.



# CHATBOT DEVELOPMENT DEPLOYMENT & SYSTEM INTEGRATION

## Testing

- Send a user prompt to the model and get the bot's response.
- Check if the response aligns with expectations.

## Integration with Other Systems:

- Use Chroma DB for storing and retrieving relevant data for user queries.
- Perform document search (retrieved\_docs) and prepare context for the response.

## Deployment:

- Integrate the trained chatbot with the frontend platform (Streamlit).
- Make the bot accessible to users for real-time interaction.



# CHATBOT DEVELOPMENT MAINTENANCE & IMPROVEMENTS

- Continuously monitor user feedback and adjust the model's parameters.
- Update model parameters like temperature, tokens, etc., based on performance feedback



# STREAMLIT FINANCIAL BOT

## Improvements Done & Next Steps

- Tested with the Question: How Can I save Money?
- Issue found: The Source is not the book. After debubing, the issue was on the Prompt. Prompted was improved.

### # Strategies to Save Money

To save money effectively, consider adopting the following strategies based on the provided context:

1. **\*\*Pay Yourself First\*\*:** Prioritize saving and investing a portion of your income before addressing other expenses. This approach helps in building up assets over time.
2. **\*\*Avoid Large Debts\*\*:** Steer clear of taking on large debt obligations that require ongoing payments. Instead, focus on keeping expenses low and gradually accumulating assets.
3. **\*\*Resist Dipping into Savings\*\*:** Use financial pressure as motivation to find creative ways to generate more income, rather than using savings or investments to pay bills.
4. **\*\*Be Financially Intelligent\*\*:** Cultivate habits that enhance your financial intelligence, such as investing in assets rather than liabilities and avoiding consumer debt for unnecessary purchases.
5. **\*\*Focus on Asset Building\*\*:** Prioritize increasing your asset column rather than focusing on liabilities like loans for luxury items.
6. **\*\*Increase Financial Literacy\*\*:** Work towards understanding how money can work for you instead of just working for money.

By implementing these strategies, you can improve your financial situation and save more effectively over time.

**\*\*Source\*\*:**

- The content from technical books provided.

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# STREAMLIT FINANCIAL BOT

## Improvements Done & Next Steps

- The improvement was done and the now we can see the book was the source.

```
'''  
# Strategies to Save Money
```

To save money effectively, consider adopting the following strategies based on the provided context:

1. **\*\*Pay Yourself First\*\***: Prioritize saving and investing before paying bills. This approach encourages financial discipline and asset building (Content 1).
2. **\*\*Avoid Large Consumer Debts\*\***: Keep expenses low and avoid buying liabilities on credit, such as cars or luxury items, until you have built substantial assets (Content 1 & 2).
3. **\*\*Increase Financial Intelligence\*\***: Develop habits that enhance your financial intelligence by focusing on creating money rather than borrowing it (Content 2).
4. **\*\*Invest Wisely During Economic Downturns\*\***: Look for investment opportunities during economic downturns when assets may be undervalued (Content 4).
5. **\*\*Mind Your Own Business\*\***: Start acquiring real assets instead of liabilities or personal effects that depreciate over time (Content 7).
6. **\*\*Be Proactive in the Market\*\***: Regularly explore potential investment opportunities by actively engaging with the market through research and networking (Content 8).

By adopting these strategies, you can improve your financial situation and potentially save more effectively.

**\*\*Source\*\*:**

- Rich Dad Poor Dad, Pages: [Various sections throughout the content]

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# STREAMLIT FINANCIAL BOT

## **Financial Bot**

Build the application using Streamlit, and the application is performing well giving accurate responses.

## **Next Steps**

- Fine Tuning the model parameters for double questions and for removing the analogies of the book when the answer is not related with financial themes.





**THANK  
YOU**

