

CIS 3100 Subset 4

By Christian Cordova
Prof. Bund

Process Overview

The proposed concept is a Financial Literacy Platform designed to educate college students and everyday people about finance, turning PhD-level knowledge into actionable, short, sweet information. It is intended to be a 24/7 accessible application or web service that uses AI to provide personalized education, simulated financial experience, and confidence to users aged 16–25 who typically lack formal financial education. The initial step was about fully understanding the problem and developing the problem statement. The framework established in Subset 1 led to the analysis of the systemic flow of information and capital. Finally, a prototype UI was developed to pose a potential solution. The following is an overview of this information

Development From Subset One To Subset Three

The platform concept has progressed from initial problem identification and strategic modeling (Subset 1) through analysis of the information ecosystem and conceptual UI/UX (Subset 2), into early software prototyping and detailed feature refinement (Subset 3):

| Subset | Focus Area | Key Development/Output |
|----------|-------------------------------|--|
| Subset 1 | Problem Definition & Strategy | Identified pain points (knowledge gap, complexity, low financial literacy among US adults at 57%) and established Critical Success Factors (CSFs) such as being easy to understand and interactive. The strategy relies heavily on AI to mitigate the weakness of lacking large capital. |
| Subset 2 | Systemic Analysis & Workflow | Analyzed the external information ecosystem (Government, Corporations, Market Makers, Media) to show how complex financial information is diffused and often "too much fluff or entirely missing important pieces" for the individual consumer. Developed the Activity Diagram detailing the machine learning system needed to organize user demographics (age, zip, interests) and distribute personalized content through a 24/7 AI helper. Conceptualized the initial UI pages, including the "Secrets" and "Discover" pages featuring an AI guide. |

| | | |
|-----------------|---|---|
| Subset 3 | Prototype Development & Feature Refinement | Initiated a software prototype using a Firebase starter to test user experience. Refined core features based on learning: 1) The Learning Page evolved to offer a "Custom Path" and "Explanations" in 3–10 actionable steps; 2) A detailed Simulated Trader Section was created with chart selectors (ETFs, Crypto, Stocks) and a journaling mechanism to record trades and mistakes; 3) The AI Financial Advisor was defined as a free, PhD-level finance manager providing tailored, step-by-step directions; and 4) A Dashboard with a performance chart tracking only simulated trading data was designed. |
|-----------------|---|---|

Because the structure of the proposal aligns with external research findings on effective financial literacy enhancement, three key critical success factors are addressed:

1. **Addressing the Need:** The platform targets the global problem of persistently low levels of financial literacy, especially among the youth and low-educated groups.
2. **Incorporating Key Enhancement Factors:** Academic literature states that financial literacy can be enhanced through both **Financial Education** and **Financial Experience**.

- **Financial Education:** The platform serves as a *financial platform* and utilizes *e-learning programmes* and *online/offline videos* to disseminate education covering necessary topics like savings, investments, and risk diversification.

- **Financial Experience:** The inclusion of a **Simulated Trader Section** provides the necessary **"real-life practice"** and *simulation of the real financial world* (financial games) that is recommended for those with zero experience to gain key skills like continuous savings and record-keeping.

3. **Tailored Delivery:** The use of machine learning and an AI Financial Advisor to provide personalized content and answer questions supports the academic recommendation that financial education programs should be **tailor-made** to suit the needs of various groups or individuals.

A.I UX

The proposed platform relies on a **Large Language Model (LLM)** as its core functional component to achieve its **Critical Success Factors (CSFs)** by automating personalized, high-level financial knowledge transfer.

Meaningful Summary of Critical Success Factors (CSFs)

The LLM is the essential tool for meeting the platform's non-negotiable CSFs, which demand that the financial literacy platform be:

1. **Easy to Understand (No MBA Required):** The platform must distill "PhD-level finance knowledge" into immediately actionable content. The LLM's primary function is to convert complex concepts (like taxes or how hedge funds work) into the "short, sweet, ugly truth" that the user desires.
2. **Accessible Anywhere, 24/7, and Interactive/Human:** The platform **needs a chatbot** and an AI helper to feel "interactive and human". The LLM serves as the **24/7 AI helper** and the **AI Financial Advisor**, ensuring users receive instant, expert guidance at any time.
3. **Actually Helpful (Closing the Literacy Gap):** The platform aims to generate behavior change by organizing user data and distributing personalized content. The LLM delivers this personalization, ensuring the advice is **tailored to the needs of that specific situation or individual**, thus increasing user confidence.

Necessity, Efficiency, and Automation via the LLM

The LLM is a **necessary link** to the product because only a sophisticated system can efficiently process the complexity of the global financial information ecosystem and deliver actionable, customized outputs at scale:

- **Exponential Efficiency in Information Synthesis:** The LLM automates the processing of massive, continuous data streams from complex sources—including **Government spending and policy, Hedge Funds, and SEC moves**. It must analyze how money and knowledge move through this entire ecosystem (Government, Corporations, Market Makers, Media) and instantaneously synthesize this intelligence. Manually attempting to distill this volume of "PhD-level" information for millions of individuals would be impossible.

- **Automation of Personalized Support:** The platform must distribute content that is **tailored exactly to the individual**. The LLM, integrated into the machine learning system, automates the grouping of users by demographics (age, zip code, interests) and provides user-specific content, eliminating the "time-wasting activity" of users watching worthless content. The AI Financial Advisor is a **free, PhD-level finance manager**, a capacity that exponentially increases efficiency compared to hiring human CFAs or PhDs (a perceived weakness of the project creator).

Full Rundown of the Functional LLM/Chat Product

The LLM/Chat product is the foundation of the User Interface/User Experience (UI/UX), ensuring the realization of the platform's value proposition—transferring actionable financial wealth knowledge to younger users and everyday people.

The LLM operates as the **AI Financial Advisor** and the primary educational engine:

1. **Inputs and Data Organization:** The machine learning system organizes user profiles using inputs like age, gender, zip code, and personal interests. The LLM (acting as the AI agent) has access to both this internal user data and the external, up-to-date economic inputs (such as government policy, Hedge Funds, and SEC moves).
2. **Core Educational Delivery (Custom Path):** The LLM generates the content for the "Learning Page" in the form of **Custom Path** course modules. The LLM uses the user's interests and current financial knowledge as a framework to deliver directions laid out in easy-to-grasp **steps**. Explanations are provided in 3–10 actionable steps that correlate directly to the user's dilemma.
3. **Real-Time, On-Demand Support:** The LLM is directly accessible on the "Discover" page, where it can answer **any financial topic or question** and provide a clear **roadmap for success or an outline of what needs to be done**. It also guides users through complex real-life topics, such as taxes, on the "Secrets" page.
4. **Enhancing Engagement:** To overcome the challenge that educational responses are "missing the engaging aspect of it", the LLM could be utilized to generate visually appealing content, such as **infographic videos**, or could reference existing high-quality educational videos on platforms like YouTube.
5. **Supporting Financial Experience:** The LLM provides the necessary feedback for the Simulated Trader Section by breaking down simulated trades in depth, noting **what went well, what went wrong, how to improve**, and providing real-life "textbook setup" examples.



Hello! I'm your AI financial guide. Ask me anything about finance, from mortgages to investing, and I'll do my best to explain it. What's on your mind?

What is a mortgage?

Explain assets vs. liabilities

What is diversification in investing?

How do taxes work for investments?

Ask a financial question...

