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How Artificial Intelligence Can Improve the Financial Literacy of People Aged 60 and Above

Table of Contents

1. Introduction

Population aging is an increasing reality in Brazil. According to data from the 2022 Census released by the IBGE (2024), for the first time, the population aged **60 and** above has surpassed the 15 to 24 age group, accounting for 15.6% of all Brazilians. This demographic shift emphasizes the urgency of addressing specific challenges faced by this group, such as resource management and financial planning.

Studies indicate that older adults face deficits in financial literacy, making them more vulnerable to over-indebtedness—particularly through payroll loans—and inclined to choose low-yield investments such as savings accounts (Santos & Camargo, 2024; Lima & Morais, 2022).

In this context, Artificial Intelligence (AI) emerges as a promising solution. AI-powered tools can offer personalized guidance, risk alerts, investment simulations, and recommendations tailored to each user's financial profile, enabling more secure and informed decision-making. This research aims to explore how AI can support the financial literacy of individuals aged 60 and above, promoting greater autonomy, knowledge, and financial well-being.

2. Objectives

2.1. General Objective

To explore how Artificial Intelligence can enhance the financial literacy of people aged 60 and above.

2.2. Specific Objectives

- To analyze academic research and articles that contextualize financial literacy deficits and the vulnerability of the elderly population.

- To use official demographic data to justify the relevance of the topic.

- To identify the primary financial challenges faced by the elderly, including over-indebtedness from payroll loans.

- To assess the potential of AI as an educational tool for this demographic.

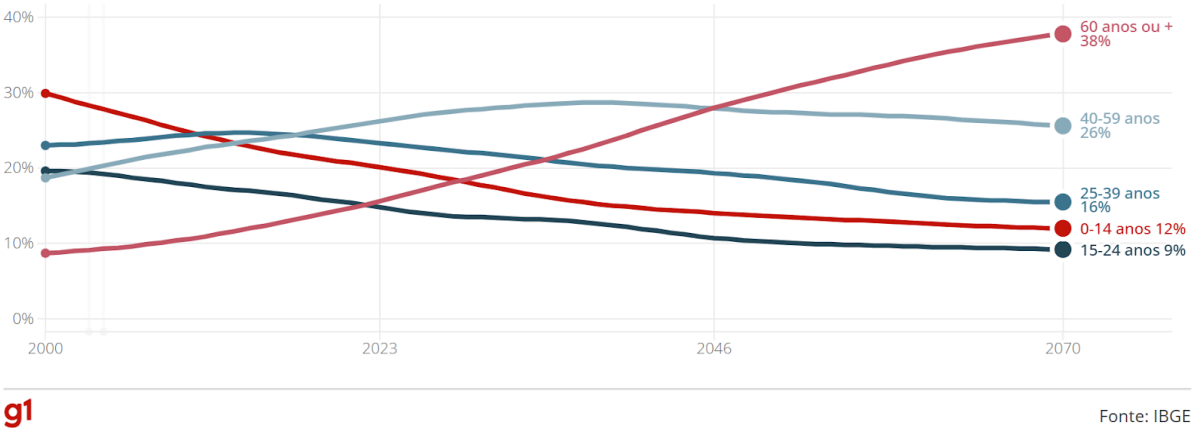
- To build a solid theoretical foundation for the next research phases, which will include practical interaction between elderly participants and AI tools.

3. Hypothesis

Older adults face challenges in financial literacy, increasing their risk of indebtedness. This research hypothesizes that Artificial Intelligence can serve as a facilitative tool, offering personalized learning and secure guidance that promotes greater autonomy and financial security for this population.

4. Literature Review

4.1. Demographic Context: Population Aging in Brazil and Its Challenges



Brazil is undergoing an unprecedented demographic transformation, with rapid growth in its elderly population. IBGE data (2024) show that the 60+ age group has already surpassed the 15–24 age group, representing 15.6% of the national population. This shift goes beyond numbers—it brings socioeconomic challenges, including the need to adapt healthcare, pension systems, and, crucially, financial education.

The IBGE projects that by 2046, the elderly will become the country's largest demographic group, and by 2070, more than one-third of Brazil's population will be 60 or older. These figures underscore the need to empower older adults with tools for autonomous and secure financial management.

4.2. Vulnerability and Financial Abuse in the Elderly

Economic vulnerability among the elderly is a recurring topic in the literature. Santos & Camargo (2024) describe the **hyper-vulnerability** of this group, frequently targeted by misleading advertisements and aggressive commercial practices from financial institutions. A lack of understanding of complex financial products, combined with misplaced trust in unreliable sources, can lead to significant financial losses.

Tolentino (2025) expands the conversation by examining financial abuse—a subtle but serious form of mistreatment requiring both public policies and protective tools. Both studies argue that financial education is one of the most effective ways to reduce this vulnerability and enable older adults to make safer choices.

4.3. The Problem of Indebtedness and the Preference for Low-Yield Investments

A key consequence of low financial literacy is increased debt among older adults, particularly through payroll loans. Lima & Morais (2022) reveal that many seniors use this credit option without fully understanding the interest rates or long-term impact on their income.

Additionally, the preference for low-risk, low-return investments like savings accounts reflects unfamiliarity with more profitable financial alternatives. A study in São João da Barra (RJ), cited by the authors, shows that despite having savings, many seniors choose safety over higher returns, often due to lack of knowledge. These findings point to the need for clear, demystifying financial education solutions.

4.4. The Potential of Artificial Intelligence as an Educational Tool

Digital technology is widely recognized as a powerful enabler of financial literacy. Hollerweger (2018) demonstrates that tools like apps and chatbots can support financial organization by offering personalized advice. AI enhances this capability, going beyond generic information to deliver insights based on a user's unique financial profile, spending patterns, and life goals.

AI can simulate scenarios, generate real-time risk alerts, and function as a continuous financial assistant, making learning more interactive and paced appropriately for older users. This adaptability is crucial for effective engagement with the 60+ population.

5. Sprint 2 Methodology

- Conducted a literature review using academic databases (scientific articles, dissertations) and official reports (IBGE, Central Bank).

- Analyzed secondary data to contextualize the issue.

- Built a solid theoretical framework to support upcoming stages of the research.

6. Preliminary Results

- Brazil’s aging population is a rapidly accelerating phenomenon, highlighting the need for focused studies on senior financial literacy.

- A lack of financial knowledge increases the elderly’s vulnerability to over-indebtedness.

- Technology—especially AI—shows promise as a means of supporting financial learning and protection.

7. Sprint 2 Final Considerations

This sprint's literature review established a strong foundation for the research. The data confirmed the topic's relevance and identified the primary financial challenges faced by older adults. The reviewed studies suggest that AI can play a strategic role in addressing these challenges. With this groundwork, the project is ready to move forward to the next phases, which include collecting primary data and validating the initial hypothesis.

8. Planning for Future Deliverables

8.1. Sprint 3 (09/01/2025 to 09/12/2025)

In this phase, the research will be deepened, and a strategy for collecting primary data will be developed.

- Interview financial professionals and aging experts to gain insights into the key financial challenges faced by the elderly.

- Assess whether the research needs to be segmented by factors like gender or social class to better understand variations in financial behavior.

- Choose between direct research (interviews, surveys) or indirect research (analysis of existing databases or reports) for data collection.

8.2. Sprint 4 (09/15/2025 to 09/26/2025)

The project enters its practical phase, with data collection and elderly user interactions with technology.

- If using direct research, develop a comprehensive questionnaire to gather both quantitative and qualitative data on financial habits, challenges, and digital tool usage.

- Analyze field research results to identify financial "pain points" such as indebtedness, lack of planning, and low tech literacy.

- Define the AI model to be used, determining whether to use an existing tool (e.g., ChatGPT with voice interface) or a custom prototype.

- Observe how elderly participants interact with AI in financial literacy contexts (budgeting, understanding loans, etc.).

- Identify where AI is most effective and where improvements are needed to make it truly accessible and impactful for this demographic.

8.3. Sprint 5 (09/29/2025 to 10/07/2025)

The focus will be on consolidating and presenting results, offering practical, evidence-based solutions.

- Present findings using clear, visual formats such as dashboards and infographics to enhance understanding.

- Propose actionable solutions for financial institutions to better serve older adults using AI-powered financial literacy tools.

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