The Application of Artificial Intelligence (AI) in Managing a Retirement-Oriented Investment Portfolio

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Introdução

Financial advisors can help by encouraging people to think about retirement financial planning, addressing issues such as the necessary habits for individuals to save enough money in adulthood to enjoy financial well-being in old age (Barrafrem et al., 2020; Jaaz, 2024). The gap between assembling investment portfolio and low levels of financial knowledge, in emerging economies (Boisclair et al., 2017; Dias & Silva, 2024), and the difficulties in accessing specialized financial advisors in retirement planning (Vieira et al., 2020), robo-advisory emerges as a response (Chhatwani, 2022).

Problema de Pesquisa e Objetivo

Coupled with the increase in life expectancy, which according to the ONU (2019) by the year 2050, there will be more people over the age of 60 than under the age of 15. As countries experiencing more intense demographic changes are likely to adopt IA. In light of this, further studies are needed to understand the impacts of AI on the elderly population and, more importantly, to understand how artificial intelligence can be effectively used in managing a retirement investment portfolio. This study seeks to answer: What is the influence of using AI in a retirement-focused investment portfolio?

Fundamentação Teórica

According to Hershey, Jacobs-Lawson, and Austin (2012), there are challenges financial planning for retirement due to behavioral biases. For Shanmuganathan (2020), the use of robo-advisors emerges to inhibit these biases, as decisions, often affected by emotional and cognitive biases, will be processed in a simple and rational manner. The decision-making process will be executed by an algorithm that understands the intended investment strategy. Artificial Intelligence can be seen as the development of "machines" that can "think," learn, and adapt (Raimundo & Sebastião, 2021).

Discussão

The Artificial Intelligence (AI) has been used to support the execution of complex tasks for humans (Novak & Verber, 2013). However, there are warnings about its use as an exit strategy for overloaded public sectors. An example of this application was highlighted by Carvalho (2023), where AI was being used in the judiciary within the social security sphere to support laws, but after some tests, its use proved fragile in the administrative structure of the National Institute of Social Security (INSS), given the subjectivity of current legislation.

Conclusão

Artificial Intelligence (AI) has been used to support the execution of complex tasks for humans (Novak & Verber, 2013). However, there are warnings about its use as a way out for overburdened public sectors. An example of this application was presented by Carvalho (2023), where AI was being used in the Judiciary within the social security sector to support laws. After some tests, its use proved to be fragile in the administrative structure of the National Institute of Social Security (INSS), given the subjectivity of the current legislation.

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