



A Systematic Literature Review of an Advisory System

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Abstract: The growth of Artificial Intelligence (AI) driven technologies has been proposed as a means to improve the standard of people's lives. The advent of the advisory system has manifested itself as a significant element in Artificial Intelligence, effectively helping people in various fields. This research presents a systematic literature review of an advisory system. This research initially presents 472 articles by examining the literature between 2015 and 2023. After a meticulous review process, the studies were filtered down to 67 articles for full analysis. This review provides significant contributions to the exploration of advisory systems, specifically in the existing framework of advisory systems, the techniques applied in advisory systems, the domain in which the Artificial Intelligence technique is being applied in the advisory system, and the validation technique used in validating the advisory system. Ultimately, this review contributes to a deeper understanding of an advisory system's role in Artificial Intelligence and in various domains for optimising an advisory system application.

Keywords: : Advisory System, Advisory System Framework, Artificial Intelligence, Systematic Literature Review

1. INTRODUCTION

In recent years, there has been a discernible and ongoing progression and emphasis on technological innovations that have propelled human progress [1]. Artificial Intelligence (AI), a scientific and technological field, is concerned with the development of intelligent computer systems and software programs that do activities that previously needed human intellect [2]. Therefore, a significant aspect of AI that receives considerable interest is its capacity to perform a wide array of tasks that resemble human actions. To attain outstanding performance in specific tasks, AI utilizes relevant sources of information and spans different sub-fields such as voice recognition, machine learning, large data analysis, and natural language processing to achieve excellent performance in particular tasks [3], [4].

Advisory system is a computer-based tool that provides recommendation to improve decision-making processes [5]. Variety of domain can gain benefit by using an advisory system as it can increase the efficiency of decision making. In addition, an advisory system has the capability to offer specialized knowledge and expert advice without the need for direct interaction, thereby saving time [6] and minimizing emotional attachment. An advisory system can be classified as an expert system [7] due to the shared

architectural pattern. However, there are notable distinctions between the advisory system and expert system in terms of their methodology and decision structure [5].

A Systematic Literature Review (SLR) is a method that employs a precise, transparent, and explicit approach, encompassing several phases [8]. This approach is designed to ensure that the literature process maintains a high level of rigor and transparency [9]. In addition, conducting a Systematic Literature Review enhances the credibility and reliability of the research for its transparency and also provide an insight of the findings in the context of the research objectives. In accordance with this approach, the aims of this Systematic Literature Review are to identify the existing frameworks, techniques and domains applied in advisory system. The organization of the paper is structured as follows: It begins with the presentation of the methodology used in the Systematic Literature Review. This is then followed by an exploration of the findings and discussions derived from the review. Finally, the paper concludes with a summary of the research's outcomes.

2. RESEARCH METHODOLOGY

This research is done by adopting the approach proposed by [8] as shown in Figure 1: