Chapter 11
Artificial Intelligence (AI) and Future Directions of Leadership From Robots (LFR) in Organizations

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ABSTRACT

Traditional conceptions of leadership have undergone a dramatic change with the introduction of robots into leadership positions (LP). AI and robots will continue to improve, and this will likely have an impact on leadership in enterprises in the future. The abstract explores the leadership capabilities of robots (LCR), highlighting their advantages in working automation. The model finishes by arguing that includes three queries about the uses of Al significantly affective on leadership in workplaces, leadership positions in the medical industry and needing ethical considerations to deal with patients' data to improve patient care. Moreover, this research has a quality assessment with five questionnaires based on the substantial impact on leadership in work systems, the study of potential futures for leadership, the standard of study's research model, following leadership ethics and matching a similar focus between our study and the papers that were collected from other researchers to watch the impact of future direction leadership activity in AI within the organization.

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INTRODUCTION

Artificial intelligence (AI) has brought to us in this new era a new scientific method that is going to change our whole life criteria. Once upon a time, people used to work by themselves but now science has developed so much that computer science is dominating the whole world. In films or fiction, we have seen that AI would take the world in one hand easily replacing humans which is now almost transforming into a reality. In the business sector, medical sector and institutes, AI is used to ease their workload. Digital is taking full advantage everywhere as AI automation and as a result, humans are being replaced by digital systems which have become a competitive advantage in industries (Lee, 2019). In this era of advanced technology, the fourth industrial revolution (4IR) period is fully under the new scientific tools or gadgets. Innovations are motivated to bring new tech so that old models can be replaced (Lee, 2019). As in the business sector, AI is also performing for the medical sector as well. All over the world, AI is being used to improve patient analysis. AI would help secure which treatment and which tests would be beneficial for a dangerous particular disease. For example, COVID-19 had become the top disease to defend and when all the tests were failing then AI helped the researchers to develop new treatments by going through all the tests by AI. A range of academics, physicians, technologists, and programmers, as well as consumers, are interested in AI because it has the potential to make revolutionary improvements to recover public health and also develop the treatment of the patient (Mohsin et al., 2021).

Technology based on artificial intelligence (AI) is no longer only for futurologists; it is already an essential aspect in many IT firms, business industries, and medical sectors which have been planned for many years worldwide by each country's governments. AI is transforming day by day and has drawn serious attention in academics. Current studies concentrate on the ramifications and immediate situations of the technology rather than watching or focusing on the bad impacts/performance of AI, which appears to have been the primary study issue for many years. Daugherty and Wilson (2018) demonstrates that the creativity and innovation of AI have become so demandable that AI has surpassed so many innovative sectors made by humans with their own hands. It could be finance, marketing, HRM or others. The effectiveness of medical resources and the standard of treatment given have recently been improved by the widespread deployment of AI-supported technology in healthcare facilities (Yoon & Lee, 2019). IT is the only AI that has innovations to the next level and upgrading the tech through machine learning, deep learning IOT, image processing, NLP, and others. Once more, Safavi and Kalis claim that by 2026, "AI applications could result in up to $150 billion in annual savings for U.S. healthcare". Numerous startups and well-known manufacturers of image devices presented at the Radiological Society of North America (RSNA, 2018) conference in Chicago declared that it is possible to get new results in medical treatment based on the help of AI by researching datasets of patients continuously.

Figure 1 that we have made to give a clear vision of the whole procedure and model of our workflow. In our model, we have focused on robotics which has AI intelligence and has the potential to become a future leader in the future. We have found three research questions related to our main topic. Each question has a different topic to discuss as our first question is based on the historical significance of technology on principles of leadership, AI, and leaders in socio-technical workplaces. The increasing application and use of Al significantly affect leadership in socio-technical workplaces. Our second question is about the current state of AI in healthcare, and the challenges and opportunities of AI in the medical section. The successful robots would assume leadership positions in the medical industry with the help of artificial intelligence (AI) integration. Finally, the last question provides the importance of