Chapter 11
Harnessing Artificial Intelligence for Revolutionizing a Business Sustainable Future

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ABSTRACT

The purpose of this research is to evaluate how artificial intelligence (AI) is influencing the sustainability plans of a number of different businesses. Work optimization are complete areas that are sighted associate in the employ environmental concerns such shift go further imperative. The paper highlights how artificial intelligence has the potential to very importantly reduce carbon footprints boost Supply Productivity and Foster behaviors that are environmentally friendly. This is complete survey of AI-driven break through problem. This research combines case studies interviews with industry experts and quantitative Information analysis in order to present a comprehensive picture of the implications that artificial intelligence has on sustainability. The findings advice that AI has the prospective to cut environmental impacts; downsides relevant to the number of Supply and consumes. To fully fulfill the potential that artificial intelligence holds for sustainability it is vital to strike a balance between environmental responsibility and technological innovation.

DOI: 10.4018/979-8-3693-9750-3.ch011

I. INTRODUCTION

In spite of the fact that global problems such as the depletion of resources, climate change, and social responsibility are becoming substantially worse, businesses are continuing to embrace cutting-edge technology in order to demonstrate their dedication to sustainability (Dresch. A et al.,2014). Artificial intelligence (AI), which employs technology that has never been seen before in order to assist companies in adopting methods that are more environmentally friendly, is at the forefront of this transformation. Artificial intelligence is a technology that has never been found before. As a result of artificial intelligence, it is feasible that businesses may be able to operate more efficiently, while also reducing the negative impact that they have on the environment. A good illustration of this would be the possibility that artificial intelligence may make it possible to design products with a higher level of attention and improve the management of waste. As an additional benefit, it has the ability to reduce the amount of energy that is used and to improve supply networks. By providing businesses with insights that are created by artificial intelligence, they are supplied with the knowledge and precision they need to make intelligent choices that are in compliance with their sustainability objectives (Manchanda. C et al., 2020). This allows businesses to make decisions that are in line with their sustainability goals.

Not only does artificial intelligence have the ability to improve operations, but it also makes it feasible to do predictive analytics. This kind of analytics offers businesses support in identifying and reducing environmental hazards or threats. It is possible that artificial intelligence systems might have the capacity to forecast the amount of energy that will be consumed, spot patterns in the utilization of resources, and discover inefficiencies that would otherwise go unreported. These are just a few examples of the characteristics that these systems could offer. By providing tools for precision farming, efficient logistics, and emission reduction, artificial intelligence (AI) encourages environmentally responsible behaviors in a variety of sectors, including manufacturing, transportation, and agriculture. This is accomplished by providing tools for these activities. Artificial intelligence is the source of these technologies. Industries such as agriculture, transportation, and manufacturing are all covered in this category of businesses/ industries (Elliott. D et al., 2019). Not only can these technical developments, which are powered by artificial intelligence, contribute to the design of a business plan that is more sustainable, but they also significantly strengthen the environmental and economic resilience of our ecosystems over the course of time. One of the symbols that is associated with the concept of innovation is shown in figure 1 as a hand clutching a lightbulb inside its grasp. The term “AI” is placed in the exact middle of the picture, and it is done so in a manner that is extremely easy to understand. The light bulb is encircled by a number of symbols, each of which is intended to represent a different aspect of sustainability or environmental responsibility. These characteristics include, but are not limited to, recycling, water conservation, solar energy, renewable energy (wind turbine), and ecologically friendly power, amongst other things. Recycling is also beneficial to the environment. In addition to this, one of these characteristics is the ability to recycle.