Chapter 8
Leveraging Ethics in Artificial Intelligence Technologies and Applications: E-Learning Management Systems in Namibia

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ABSTRACT

The purpose of the study reported on is to establish ways in which ethics in artificial intelligence (AI) technologies and applications can be leveraged towards improved, standardized and safe e-learning management systems (eLMSs) at higher education institutions (HEIs) in Namibia, against the background of semantic web technologies and applications in artificial intelligence, the internet of things (IoT), and artificial intelligence of things (AIoT).

INTRODUCTION

This section will describe the general perspective of the chapter and end by specifically stating the objectives.

Semantic Web Technologies and Applications in Artificial Intelligence of Things

The value that Artificial Intelligence (AI), the Internet of Things (IoT), Artificial Intelligence of Things (AIoT) and the Semantic Web had contributed to the development of industry, research, and society, in

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general, is relevant for a future society. As part of this book, the chapter could serve as a reference for the development of Semantic Web technologies in Industry 4.0 and the AIoT.

Leveraging Ethics in Artificial Intelligence Technologies and Applications at Higher Education Institutions: E-Learning Management Systems in Namibia

According to a previous chapter by Uunona and Goosen (2023, p. 310) on leveraging ethical standards in artificial intelligence technologies as a guideline for responsible teaching and learning applications in the *Handbook of Research on Instructional Technologies in Health Education and Allied Disciplines,* AI "is revolutionizing the field of education by providing new opportunities for online learning. However, as with any technology, there are ethical" implications that must be considered. With the commencement of the conversation on AI, the awareness of such ethical considerations needed to be kept in mind. Such a conversation should trigger the possibility of considering a logical culturally-sensitive framework that will be used to provide guidelines for national policy development on AI.

Recommended Topics

From the recommended topics for the book, this chapter will cover the following (although it is not limited to these):

- Usability and user experience in Semantic Web and AIoT application environments
- AIoT-based Semantic Web applications and public services
- Use of model and learning algorithms and machine learning in AIoT and Semantic Web

Target Audience

As part of this book, the chapter is aimed at academics, students, and industry, around topics such as the manufacturing industry, health and sciences, as well as e-government.

Objectives

The objective of this quality chapter is to contribute to the book on topics related to cutting-edge technologies and serve as a knowledge base in terms of future research directions. Some of the objectives of the study reported on in this chapter include to:

- Explore current and future-projected developments in AI autonomy and how these could impact education, and
- Establish the extent to which the Namibian government had considered AI implications in its strategic plans and associated policies.