

Application of artificial intelligence for virtual teaching assistance (Case study: Introduction to Information Technology)

Obert Muzurura, Tinomuda Mzikamwi, Taurai George Rebanowako, Dzinaishe Mpini

Abstract

Technology has advanced and diversified throughout Zimbabwe's institutions of higher learning and has led to drastic and inevitable improvements in the higher and tertiary education sector of the country. These improvements are the genesis of enhanced students' learning environments: as we now have e-resources, online learning and video- conferencing, to mention a few. This paper aims at exploring how to leverage Zimbabwean higher and tertiary education with Artificial Intelligence (AI) based Virtual Assistants (VAs) among learners from various faculties at Midlands State University (MSU). Due to the increase of lecturer to student ratio per module as the economic crisis tightens and lecturers are being drained out to seek for better life, students are enduring a real and untamed challenge in their learning environments. It has become difficult for students to consult the lecturer one-on-one in case they want more information about the module due to their hefty figures and limited time. Therefore, the researchers intend to research, design and develop an Artificial Intelligence grounded VA that would respond to the students' requests and act as an introduction to Information Technology study pack.

Key words: Virtual Assistant (VA); Artificial Intelligence (AI); machine learning (ML); Chatbots in higher education; ChatGPT; conversational agents; generative pre-trained transformers (GPT); learning & teaching.