National University of Science and Technology

Faculty of Applied Science

Department of Computer Science

TITLE:

An assessment of the adoption of Machine Learning by Commercial banks: A case of Zimbabwe

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Abstract

The objective of the study is to assess the adoption of Machine Learning by commercial banks, a case study of Zimbabwe. The assessment carried out by the researcher determined the level of adoption of Machine Learning to business, employees and customers, identified opportunities presented by adoption of Machine Learning, identified the impediments, critical success factors and the failure points. The study gives recommendations to commercial banks for adoption of Machine Learning. It implemented an exploratory research technique focusing on commercial banks. The significance of the study lies principally in the significance of commercial banks to the economy. Research output was presented using tables, graphs and qualitative analysis. Quantitative data was presented and analysed using descriptive statistics while qualitative data followed the research questions of the study. The research used the Diffusion of Innovation framework which classified banks into different categories which are innovators, early adopters, early majority, late majority and laggards. There was a consensus that adoption of Machine Learning results in great benefits to banks, bank employees and customers.

Keywords: Machine Learning, Machine Learning strategy, Diffusion of Innovation Theory, Supervised Machine Learning, Semi-supervised Machine Learning, unsupervised Machine Learning and Reinforcement Machine Learning.