Review of: "Exploring machine learning techniques to develop predictive models to address unemployment rates in the implementation of Industry 4.0"

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Potential competing interests: No potential competing interests to declare.

This research focuses on the use of machine learning algorithms to develop predictive models to address unemployment rates in developing countries during the implementation of the I4.0. The author conducted an extensive literature review to identify the economic and social factors that impact unemployment rates in developing countries. The literature review revealed that a considerable influence on unemployment rates in these countries is attributed to elements such as economic growth, health and safety, inflation, population growth, education levels and technological progress.

The research is relevant, specifically in the period post COVID-19 which has influenced significantly the unemployment rate.

My suggestion:

- The author should base the background of the study on the vision of SDG 8 target 8 which aimed by the year 2020 a reduction of youth unemployment.
- Indeed. Socio-economic issues influence a lot the rate of unemployment rate in developing countries. However, some studies (e.g. https://doi.org/10.3390/su142013001 and https://doi.org/10.1016/j.engappai.2023.106728 which have showed that in such countries, we need to look at contextual factors related to specific developing countries as among developing countries, we have those which are unstable socially, economically, and politically while others are less affected) recently have focused on contextual factors as features to address the problem of unemployment. The author could also read them.
- Why not focus only on curriculum than proposing a predictive model? Is it the only way to address the unemployment problem in developing countries?
- The author has claimed that “This study aims to develop predictive models for unemployment rates in developing countries during the implementation of Industry 4.0 using machine learning techniques”. However, there is no predictive model developed in this paper. He author could say “This study aims to investigate possibilities of developing predictive models for unemployment rates in developing countries during the implementation of Industry 4.0 using machine learning techniques”.
- The author has recommended that policymakers should prioritize investment in education and training to equip the workforce with the skills required for Industry 4.0. But, current research (https://doi.org/10.1016/j.engappai.2023.106728 and https://doi.org/10.1109/ACCESS.2020.3040338) has showed that

skills and education related factors are not sufficient when developing predictive and prescriptive models to address the unemployment problem in developing countries. Hence, the author should think about real-world factors which influence employability in developing countries such graduate-employer relationship, corruption, nepotism...