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Peer Review

Review of: "Conceptualizing Predictive Conceptual Model for Unemployment Rates in the Implementation of Industry 4.0: Exploring Machine Learning Techniques"

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Strengths

The paper's most notable strength is its practical, policy-oriented framing. By centering the predictive conceptual model on real-world decision-making, helping policymakers and businesses respond to unemployment during Industry 4.0 adoption, the research bridges academic theory and applied use. The model's dual function of forecasting future unemployment rates while tracking progress toward reducing them gives it genuine utility beyond just academic contribution.

A second strength is the breadth of the literature survey. The paper draws on a diverse range of ML algorithms (SVR, Random Forest, Gradient Boosting, LSTM, ANN, AdaBoost, ensemble methods) and contextualizes each with country-specific studies across China, India, Brazil, Malaysia, South Africa, and others. This comparative grounding strengthens the argument that no single algorithm is universally superior and that context shapes model selection.

Weaknesses

The most significant weakness is that the paper proposes a conceptual model without any empirical validation. No dataset is collected, no algorithm is actually run, and no performance metrics are reported. This makes the "findings" largely theoretical assertions rather than evidence-based conclusions, a major limitation for a paper claiming to demonstrate model effectiveness.

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A close second is methodological shallowness in the literature review process itself. The paper describes standard literature review steps generically, without reporting inclusion/exclusion criteria, the number of studies screened, or how conflicts between studies were resolved. This reduces replicability and transparency considerably.

Declarations

Potential competing interests: No potential competing interests to declare.