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Loan Default Prediction Using Machine Learning Algorithms: A Systematic Literature Review 2020–2023
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Abstract
This study conducts a systematic literature review (SLR) on the prediction of loan defaults using machine learning algorithms (MLAs) from 2020 to 2023. It critically examines the transition from traditional statistical models to advanced ML techniques in assessing credit risk, with a focus on the banking sector's need for reliable default prediction methods. The review highlights the predominance of the Random Forest algorithm for its superior handling of complex datasets and predictive accuracy across various studies. Additionally, it identifies Kaggle as a crucial source for research datasets, underlining the importance of accessible and comprehensive data in developing effective predictive models. The paper also outlines future research directions, emphasizing the integration of big data analytics, the application of sophisticated ensemble methods, and the potential of deep learning technologies. Acknowledging certain limitations such as the study's temporal focus and database selection criteria, it calls for ongoing research to explore emerging trends and methodologies. The findings aim to guide researchers and practitioners in enhancing loan default prediction models, contributing to more effective credit risk management strategies.

Author Keywords
Loan default prediction; Machine learning algorithms; Microfinance banks

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