

# **Employing Artificial Intelligence and Algorithms in the Digital Lending Industry: Measuring and Managing Risky Consumer Behaviour**

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## **Abstract**

Lenders employ AI and algorithms in analyzing the potency for loan advancement. AI and algorithms are seen as efficient, and banks seem to be adopting or exploring the AI applications and algorithms to manage risk and cut bottom line cost, thus replacing costly, laborious, and repetitive activities along the value chain. The chapter offers practical solution to the practitioners and stakeholders on identifying customers associated with consumer risky default behaviors. It then advises on how to deal with these issues and what banks should employ to curb risky borrowing behavior.

## **Chapter Preview**

### **Introduction**

Credit loans are considered to be a cornerstone of the banking industry. Consequently the lending process starts with bringing a borrower onboard, collecting information about the borrower, then validation with the help of various documents to decide the amount of credit or loan to be approved on the precise interest rates. Ideally the banking industry operates within a very sensitive environment -supremely relying on information to run its business. However when information about the customer seeking for loan is not perfectly blended with the process, then these banks find themselves with a lot of non-performing loans. The challenge among the lending institutions has been identifying this lot of customers with defaulting tendencies before they even borrow. Essentially the consumer behavior patterns have been less predictable in the past due to insufficient tools to analyze them, but with the newly embraced computing approaches highly capable of extracting meaning from imprecise data and detecting trends that are too complicated to be

discovered by either humans or other conventional techniques (Metawa, Hassan & Elhoseny 2017), the ground is slowly shifting to the industry players favour.

Kaya's (2019) opines that the banking industry is a data driven commerce, therefore such data is essentially the artery of which the industry links to almost all truncations lines, from traditional deposit taking and lending to investment banking and asset management. Parenthetically Vedapradha and Hariharan (2018) gave the impression that as a result, most banks employ a large number of indices that are used in the predictive analysis. This means that the loan sector is particularly keen on analyzing its potential loan customers to safe guard the business from shocks of losses and non-performing loans. Every loan is then considered by a highly dimensional vector of loan characteristics including; credit score, collateral, interest rate, loan balance, loan purpose, loan age and size, payment history, and location (Metawa, Hassan, & Elhoseny 2017). Chopde, et al (2012) avers that these lenders tend to classify applicants dependent on characteristics of the borrower (such as age, education level, occupation, marital status and income), the repayment performance on previous loans and the type of loan.

Kenya has served as a cradle of Mobile Money Transfer (MMT) innovations prompting Kaffenberger and Chege (2016) to admit the presence of more than 20 digital lenders credit has focused on financial inclusion -one of the most progressive in the developing world. However world over, financial institutions face a number of complications from lax credit standards for borrowers and counterparties, poor portfolio risk management, or a lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of a bank's counterparties (Chopde, et al 2012). Giftedly the banking industry has placed a premium that such decisions should be made using the huge and substantial data available to them. Indeed the processing time of the traditional brick and mortar players has served to analyze a large number of variables and a variety of diverse cases related to different customers (Shorouq, Yaseen & Elrefae 2010) concludes. This exertion on the banks is being taken off the industry through the digital loans advancement. The evolution of digital banking platforms through innovations has phenomenally surged the uptake of loans and bolstered financial inclusivity among the poor. These loans are creating opportunities by offering increased liquidity to household, small business loans and capital for entrepreneurs (Kaffenberger & Chege 2016).