

Investment Partners Bank

Problem Statement

In these current economic conditions, how can Investment Partners Bank use Machine Learning to build an advanced predictive model to analyze historical data to identify potential default risks, so that by the end of the next Fiscal Year, that bank has reduced the current loan default rate from 20% to under 8%, for all loans that exceed \$50,000.00.

Context

The financial industry faces an ongoing challenge in effectively managing the risk associated with loan defaults. Unpredictable economic conditions and shifting borrower behaviors make it imperative for lending institutions to adopt proactive strategies for safeguarding their financial stability. The lack of a systematic and data-driven approach to predict loan defaults hinders the ability to make informed lending decisions, resulting in potential financial losses and a strain on sustainable financial practices.

Through the implementation of **SecureLend** project, the *Investment Partners Bank* hope to proactively identify high-risk loan applications, implement targeted risk mitigation strategies, and ultimately contribute to the establishment of sustainable financial practices. This project aims to revolutionize the way the bank approach risk management, enabling them to make responsible and informed lending decisions in an ever-evolving financial landscape.

Success criteria

The credit assessment team has as an automated system that enables them to evaluate the loan applications, in a highly effective manner, such as the ability to apply historical knowledge in risks assessment, so that potential risks factors are flagged.

These alerts will provide the credit assessment team to evaluate the creditworthiness of applicants.

Scope + Risks

Scope: The project to focus on large loans, which exceed \$50,000.00.

Risks:

1. Bias and Fairness: If there is any bias in historical data, the Machine Learning Model can inadvertently perpetuate biases.
2. Regulatory Compliance: This can be a significant concern as the models may not recognize special eligibility criteria.
3. Operational and Implementation challenges: The IT team may face challenges integrating Machine Learning applications into the existing systems, especially legacy systems.
4. Data privacy concerns: compliance with data protection regulations.

Constraints

Time: The project must be implemented so that the system is available from the beginning of the new Fiscal Year to facilitate the loan application process.

Technology: The CRM and loan application processing systems are of different generations. Integration may become a challenge.

Stakeholders

- The senior leadership
- Marketing team
- Loan processing team.

Key data sources

- The current loans data systems
- Customer details
- Loan applications