

Automating Credit Processing using AI/ML for Banking Services

Mindtree PoV



Has your banks' lending institution fully transitioned its credit process to full-fledged digital automation?

Within a typical loan disbursement cycle, various processes need to be conducted by multiple teams. First, the banks' credit teams need to physically collect the customer's application from multiple collection agents and branches. Within this, there are standard credit processes such as onboarding, verification of income details, work information, credit score checks, background validation, etc.

However, due to the COVID-19 pandemic, there is a reduced footfall of customers in the banks and limited staff to cater to their credit processing needs. Given that this is the reality of our current times, banks and lending institutions need to incorporate digital automation into their workflows. This will help them reduce their dependency on different stakeholders such as sales agents, credit sourcing teams and credit operation teams.



Mindtree

A Larsen & Toubro Group Company

Welcome to possible

As part of the ongoing COVID-19 crisis, Central Banks across the world have released special loan offerings for their customers, such as US SBA's "Paycheck Protection Program" (PPP) program, to tide over this crisis. This further drives the need for a digital and contactless automated system that can help banks process credit applications faster and disburse loans to their customers. Banks can adopt the below methods to automate their credit decision-making processes by reducing default risks and improving process efficiency

- Implementing automated customer onboarding & decision-making
- Reducing turnaround time (TAT) and improving process efficiency
- Reducing default/write-off probability
- Targeting the right customer at the right time
- Meeting regulatory & compliance standards
- Setting the agenda for the future

By implementing the aforementioned capabilities, banks can mitigate risks, improve processes efficiency, and reduce defaults from various retail and corporate customers. Let's look at each of these capabilities in detail:

Implementing automated customer onboarding & credit decision-making:

Banks and lending institutions are currently performing various activities on different applications such as CRM (Customer Relationship Management), LOS (Loan Origination), and credit scoring to arrive at the final credit decision. Given the multi-faceted nature of this process, it involves more time and utilizes multiple teams to process a credit file. However, by digitizing themselves, banks and lending institutions can meet the needs of various customers by:

- Enabling real-time onboarding of customer through omni-channel platforms for getting credit loans
- Facilitating the uploading of documents digitally on an onboarding platform, which will make it simpler to process the credit files
- Implementing process automation tools (such as UiPath/Automation Anywhere) at the backend to validate customer documents and process the credit files as per requirements
- Automating KYC, BL, CDD, NL, De-dupe checks as per the bank's requirement and arrive at the credit loan scores
- Automating real-time integration with 3rd party credit agencies for score validation and credit decision making processes
- Setting up BOTs to provide reminders to customers for any missing documents

All of the metrics mentioned above can play a huge role in improving the banks' day-to-day functions by eliminating manual intervention in these automated processes. Identification of these decision-making processes will be a key priority for the business team. The IT team can prepare a roadmap for automating credit decision-making based on the identified processes with the parameters, such as KYC (Know your customer), AML (Anti-Money Laundering), CDD (Customer Due Diligence), NL (Negative List), BL (Black List) checks and credit scoring applications.

Reducing TAT (Turn Around Time) and improving process efficiency:

Credit decisions can be automated for critical processes that will help banks reduce data manipulation by end-users or sourcing agents. Banks can improve their turnaround time by implementing the following solutions:

- A robust data analytics application **with the help of AI/ML, which can help banks process credit files more accurately**
- Consolidating different applications **with APIs and Microservices**, from customer onboarding on omni-channel platform to credit file processing in the backend. Mindtree has capabilities built over **Apigee/Mulesoft platform** for API services
- **Automate KYC and AML validation process** as part of customer onboarding with real time integration with Credit scoring agencies



Reducing default/write-off probability:

Based on the data consolidation with near real-time experience, banks can validate the customer details from various source systems and external interfaces and arrive at the **default prediction** for new/existing credits offered by the banks. Mindtree has developed custom models with the help of AI/ML over delinquency predictions on lending modules:

- These will be the key factors while processing a credit file and need more accuracy than the current manual process followed for disbursing new loans
- Custom models can be developed with AI/ML as per the banks' requirements & product features. These models will empower banks to make accurate decisions as part of their credit processing
- The custom model will also help banks predict delinquency in advance based on customer transaction patterns & historical transaction records

Targeting the right customer at the right time:

In the current pandemic situation, banks have to proactively identify target customers and offer them products that will lead to enhancing the banks' revenue and profitability without compromising the credit process. Also, banks want to provide credit to the right customers to avoid credit-defaults in the future. For this banks can utilize their pre-existing enormous customer database that can be analyzed in detail as well as context to fetch details about potential customers. In order to identify the right customer, banks can leverage predictive models to identify and provide lists of potential customer segments that can be used for targeted credit offerings.

Banks have to be well prepared with cognitive automation credit processing solutions to analyse and provide the right products - to the right customer - at the right time. As a result, there will not only be lesser manual intervention, but the credit risk will stand greatly reduced as well.

Meeting regulatory & compliance standards:

Banks across the globe have to comply with mandatory rules and regulations set by the Central Bank of the respective country as part of their credit processing. There can be various process lapses while processing a credit file in KYC, BL, CDD, AML checks conducted by the banks' operations team. Banks also have a vast amount of data collected from their customers. This data needs to be used effectively by creating data models, which will ensure that there are no major process lapses as part of credit file processing.

For banks to go digital, implementing a robust AI-based data model will help them enhance their operations capability and avoid process lapses that can occur during manual operations. Thus, with AI/ML, banks can meet regulation and compliance standards and process credit files without any discrepancies.

LIBOR Transition:

- The transitioning of LIBOR to a new benchmark rate creates a massive opportunity for the IT industry and business consulting services. It is a complicated assignment, and the impact varies across financial institutions. The implementation of new alternative risk-free rates that replace LIBOR will be different for each financial institution due to product exposure
- Mindtree is establishing a LIBOR transition focused enterprise-level governance and program management for financial institutions. The program will assess the risk and impact areas covering trading, liquidity, pricing, risk valuation, tax, accounting, legal businesses and related technology operations
- Mindtree has also come up with an ML and NLP based solution in the LIBOR Transition space, in collaboration with our FinTech partner viz Capital Quant who provides cognitive automation solutions focused on the financial services sector

For instance, in the PPP “Pay Check Program” Banks have to adhere to mandatory rules and regulations to process the credit file for the SBA (Small Business Administration), such as Lender agreement to make SBA-guaranteed financing available as part of the CARES Act. With automated processes that utilize AI/ML technology, these kinds of customer validation processes can happen in real-time. Banks would save time and process the PPP credit faster without any lapses in regulation.

Agenda for the future:

Banks and Fintech companies across the globe are working towards automation in the area of credit decision-making process. This will help banks process credit faster, without compromising on various processes that are currently handled manually by different stakeholders.

Every bank and financial institution needs to have a cognitive & intelligent automation way for credit processing. These solutions will help banks increase their market share, revenue, and profitability, which will further reduce their dependency on various stakeholders and vendors for processing the credit files. A major credit bureau player plans to roll out a solution that will provide credit information for banks and other lenders to offer customers the option to supplement their credit report with payment information from utility, phone and other companies. Other fintech players such as Lending Club and Kabbage are using alternative data to offer peer-to-peer lending and small business lending in the US Markets.

At the end of the day, banks would like to prevent fraud and reduce default risks on credit processing. Banks across the globe can implement a data analytics model, which will help them process the credit files with more accuracy as per the Central Bank's regulatory laws. This allows banks to focus on their core business competencies and enhance client satisfaction.

Reference links:

<https://www.automationanywhere.com/case-study/covid-19-loan-processing>

<https://www.uipath.com/resources/covid-automations/automation-smb-applications>

<https://www2.deloitte.com/uk/en/pages/financial-services/articles/intelligent-automation-in-credit-risk-management.html>

<https://www.forbes.com/sites/forbesbusinessdevelopmentcouncil/2020/07/01/top-three-data-trends-helping-to-transform-lending/#3848d379e3f8>

<https://www2.deloitte.com/uk/en/pages/financial-services/articles/intelligent-automation-in-credit-risk-management.html>

<https://www.forbes.com/sites/forbesbusinessdevelopmentcouncil/2020/07/01/top-three-data-trends-helping-to-transform-lending/#3848d379e3f8>

<https://www.mindtree.com/industries/banking/libor-transition>

<https://www.mindtree.com/industries/banking/turbo-lending-disaster-loan-management-solution>



Arunachalam Natarajen

Business Consultant, BFSI

Arunachalam is a subject matter expert and strategic business enabler with Mindtree's BFSI vertical. He is responsible for delivering innovative technologies to our customers while leading domain consulting, alliance management and domain competence building.

About Mindtree

Mindtree [NSE: MINDTREE] is a global technology consulting and services company, helping enterprises marry scale with agility to achieve competitive advantage. "Born digital," in 1999 and now a Larsen & Toubro Group Company, Mindtree applies its deep domain knowledge to 290+ enterprise client engagements to break down silos, make sense of digital complexity, and bring new initiatives to market faster. We enable IT to move at the speed of business, leveraging emerging technologies and the efficiencies of continuous delivery to spur business innovation. Operating in more than 15 countries across the world, we're consistently regarded as one of the best places to work, embodied every day by our winning culture made up of over 21,000 entrepreneurial, collaborative and dedicated "Mindtree Minds".