Fast Forward from Financial Statements to Making Loans

For Banks and Financial Lenders, a critical process in assessing credit risk is obtaining and analyzing the borrower's financial statements to calculate financial ratios. Using Machine Learning (ML) and AWS Textract, the solution applied to automate the Financial Spreading enabled this process to take minutes versus days to complete.

Our client is a leading software provider in the Asset-Based Lending world, with a specific module in their lending product for handling financial statements named the Cync Spreading. The common financial statements handled in the process are the Balance Sheet, Income Statement, and Cash Flow Statement. In larger organizations, the financial numbers are maintained using the company's financial system that can be directly connected and imported using an API, while in Small and Medium Enterprises the financial statements are either .PDF statements, Excel files or Scanned .PDF documents.

CHALLENGE

The process of manually entering the financial statements into an excel file or a third-party application to conduct credit analysis is a very time-consuming task. Our premium client, Cync Software® approached InferIQ to use the product intelligence to extract and place fields and respective values so customers could instantly make a decision based on custom ratios afforded by the Cync Spreading application. The process is also exposed to an increased risk of error due to the manual nature of the process. In addition to this time-consuming manual entry process, the Small and Medium Enterprises companies would use a variety of unique financial terminologies in these statements, requiring Subject Matter Expertise (SME) to map them to standard financial terms. Ensuring that the mapping of these standard financial terms to the applied solution is done correctly is critical to remain in compliance with GAAP standards since credit decisions are influenced by final ratios.

"Our clients are lenders who face the demanding task of spreading financial statements from borrowers in a timely manner. Automation is a must for timely decision-making and InferIQ delivered."
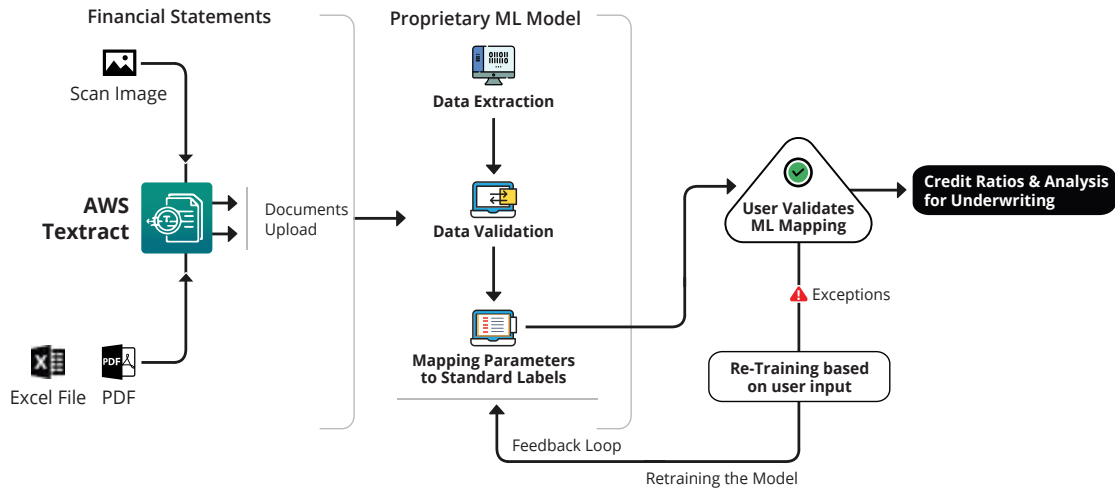
SOLUTION

1. Extracting financial content using AWS Textract

Using the power of AWS Textract to extract PDF documents containing live text or scanned images. The InferIQ team created a solution to extract text from .PDF documents and perform Optical Character Recognition (OCR) using Computer Vision with significant accuracy on scanned .PDF files. Unlike traditional OCR solutions, AWS Textract provides high level of accuracy in extraction.

2. **Our custom in-built Machine Learning (ML) model was then used to map the unique financial terms into GAAP standard financial terms**

Our custom mapping model leverages Natural Language Processing (NLP) to accurately align and map a borrower unique terms with GAAP standard financial terms on their respective spread. Our approach incorporates our "human in the loop" feature, allowing users to correct perameters and teach machine learning, helping to enhance the quality of the data model over time. The constantly evolving lexicon of the machine learning model coupled with user feedback allows InferIQ to consistently improve the speed and accuracy of data extraction and placement required for complex financial decisions. After the corresponding data was fetched for each of the applicable parameters, the ratios were auto calculated.

Machine Learning-Based Framework for Cync Spreding

BENEFITS

Faster Processing Time: With the ease of use, speed, and accuracy in calculating financial ratios, the tool delivered exceptional value to the user by empowering financial institutions to reduce loan processing and credit risk assessment time.

Improved Process Efficiency: The solution InferIQ applied also helped bankers focus on their core business and customer priorities, improving overall operational efficiencies.

Improved Capability: As a result of our solution, the processing time for mapping statements and extracting financial data were reduced by 80%. The InferIQ approach also incorporated the capability to extract from scan documents, which was not possible earlier.

OUR AWS COMPETENCIES

aws
PARTNER
Advanced Tier Services

- Public Sector
- Solution Provider
- DevOps Services Competency
- Financial Services Competency
- Migration Services Competency

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Find out how InferIQ solutions can help your business. Contact us today!

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