



CASE STUDY

Solving Mortgage Loan Processing at Scale

\$4.8M

Operational savings
over three years

500

Different document types
understood

1.4M

Pages processed
every month

Automating mortgage processing requires understanding highly complex customer documents, without disrupting existing processes.

At one of America's largest retail banks, the home lending team identified they were losing customers to competition because of a slow home loan process.

The bank issues millions of new mortgages each year and as part of the application process, they request evidence from their customers on income and expenditure – which is typically submitted through documents (such as tax forms, bank statements, pay stubs). Given their business's breadth, they calculated that 500 distinct documents were being submitted by 90% of their customers. The bank's risk team analyzed these documents manually to conduct credit checks and the customers' eligibility for mortgage loans.

Given the considerable variability of content across the documents, there wasn't a straightforward way for the bank to automatically understand them. They relied on a large team of operators who manually reviewed over 1.5 million pages per month across several days. In addition, the customers had to wait while the documents were being processed, creating additional friction in the process.

Customers submitted customer files in huge packets – which included up to 900 pages in a single PDF. The operations team manually classified, split up and then transcribed all information into a CSV file to be reviewed by the risk team. Existing tools and technologies could not help automate this process, as they relied on fixed-templates and brittle rules.

Leverage technologies to digitize, classify and understand documents at scale.

Instabase was chosen by the bank due to its accuracy in understanding complex documents, alongside the ability to solve end-to-end problems. Using a combination of building blocks such as OCR, natural language and computer vision, the team configured a range of solutions for specific classes of documents such as Pay Stubs and Tax forms.

As a first step, the solution enabled automatic digitization of over 500 document types across various versions. Working

closely with the Instabase application team, the bank was able to configure a document workflow to automate the end-to-end process.

Next, Instabase split-up loan packets into their subparts and leveraged machine learning models to auto-classify documents into various document types. Leveraging the platform, the bank team quickly built over 100 applications to tackle the different classes of documents, which they could string-together to solve the end-to-end mortgage process. For fields that did not meet their high confidence threshold, documents were routed straight back to a team member for human review, ensuring that every case was accurate. In only a few months, the bank had developed over 100 applications built based on Instabase for their broad document set.

Reduced cost to income achieved with ensured compliance

The time taken to conduct credit audits has been reduced significantly by cutting out the manual, laborious tasks of processing over 1.4 million documents each month. There has been a positive change in their customer experience as the applications are processed quickly and accurately. The bank has forecasted savings of \$4.8 million over three years, significantly impacting their ability to invest further in technologies.

Looking forward, the bank is exploring Instabase capabilities across various use cases to improve efficiency and solve compliance and governance use cases.