

Generative AI + IDP Extracts Data from Lease Agreements with 82% Accuracy





Ashling is a global boutique consultancy specializing in intelligent automation and Al-driven solutions. With a team of 250+ specialists and awardwinning expertise across agentic Al, robotic process automation, intelligent document processing, and beyond, Ashling helps businesses unlock value and scale impact.

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Challenge

A fast-food franchise with 40,000 global locations needed expert advice to improve a tedious business process related to its commercial leasing agreements. The company had 25 full-time outsourced employees who were responsible for manually reading and re-entering data from 30,000 lease documents annually. This manual method was prone to errors and required rework, especially considering that each new lease document could exceed hundreds of pages.

Lease agreements are often hard to track and classify because they are buried in other contracts. Financial Accounting Standards Board (FASB) latest requirements impose an additional burden on all US companies, requiring more resources to complete the work. Tackling this complex issue is crucial, as companies could face debt covenant failures and future financing risks.

To comply with FASB rules, the fast-food franchise must extract more than 350 fields from lease-related documents weekly and input the data into their lease management system. The challenge is compounded by commercial leasing agents submitting lease documents of varying quality, types (such as PDFs, images, and email attachments), and languages. The documents also contain handwriting, checkboxes, and tables, making them difficult to process uniformly.

To solve this challenge for the fast-food franchise, Ashling experts developed an innovative solution, leveraging ABBYY Vantage with SS&C Blue Prism technology and GPT-4 Turbo.

Technology used







Solution

After several attempts with different advisory firms and technologies, the franchise was eager to find a resolution. In the interest of time, Ashling experts repurposed an array of technical components that were previously built for miscellaneous client needs.

While trialing several technology combinations across five different approaches, its experts recognized that one yielded a vastly superior result. ABBYY Vantage is a powerful intelligent document processing (IDP) solution for categorizing the different agreement types and extracting segments of the agreement (Preamble, Premises, Renewal Options). Meanwhile, GPT-4 Turbo provided accurate field-level extraction, especially when fed a specific segment of the agreement.

GPT4 and ABBYY Vantage created a consolidated user experience, providing results before any field-level training. This approach leverages IDP for classification and segmentation and GenAl for field extraction. Integrating generative AI, IDP, and RPA to automate data extraction and entry achieved an 82% accuracy rate. For the small subset of fields falling outside the configured confidence threshold, ABBYY Vantage's manual review station is utilized to enable human users to correct machine-extracted values. The machine learning model learns from the human-corrected values and improves over time, resulting in reduced manual review requirements.

A winning combination of technologies for end-to-end lease extraction



Document ingestion

Blue Prism Digital Workers gather documents from Outlook and send them to ABBYY Vantage.



Classification

ABBYY Vantage classifies the document type.



Segmentation

ABBYY Vantage parses the document to GPT-4 turbo with an associated prompt.



Field extraction

GPT-4 turbo extracts key fields from each segment.



Manual review station

Field extractions are presented in ABBYY Vantage's native verification station for manual review. Users can jump to the relevant section of low-confidence fields, which dramatically expedites corrections.



Data entry

Once the manual review is complete, Blue Prism Digital Workers perform formatting cleanup, match extractions to pick lists, and populate the leasing application.

Value







