

AI TRANSFORMATION TALES

Reimagining  
document  
extraction from  
hours to minutes  
using AI



BACKGROUND

Our client is a leading automotive interior and under-hood solutions provider, from door panels and center consoles to frunks and full garnish packages. The business was incorporated in 1984 and is headquartered in Livonia, Michigan. The company has production facilities in the Metro Detroit area; Shreveport, Louisiana; Windsor, Canada; and Lobelville, Tennessee and a design center in Chandigarh, India.

The client understood that manual document analysis and data extraction are often time-consuming, error-prone, and costly, impacting overall operational efficiency. The client is committed to their digital transformation efforts and recognized the need to automate their document analysis processes to enhance their customer experience and streamline internal operations. The objectives



## BACKGROUND

- Build an AI model to seamlessly analyze customer documents
- Reduce the manual effort and errors associated with traditional document handling
- Free up existing resources for more strategic tasks
- Enhance customer satisfaction while uplifting employee productivity

This case study outlines our journey in developing an AI-powered document analysis and information extraction system, highlighting the strategies, technologies, and outcomes that transformed the client's document handling processes.



## THE SOLUTION

To address the challenge of extracting multiple parameters from diverse document templates, Aspire's AI team designed an AI-powered solution leveraging machine learning and Artificial Intelligence. Our machine learning specialists employed a combination of AI/ML advanced algorithms and training methodologies to build a robust and adaptable AI process that will make a huge difference in the ways our client can work with its document analytics and extraction processes.

A quick summary of how Aspire made the challenge a competitive edge for the client and Aspire alike:

- Collected and curated a comprehensive dataset representing the various document templates and formats encountered in the client's operations. This dataset included a wide range of layouts, structures, and content variations.
- Developed a comprehensive dataset representing an array of document templates. By training our models on this diverse data, we prepared them to excel in recognizing and extracting information from any format that came their way.
- The heart of our solution lay in state-of-the-art deep learning models, including CNNs and Transformers. These powerful tools enabled the system to uncover complex patterns and extract precise information with unparalleled accuracy.
- In order to maintain robust standards, we set strict accuracy thresholds and implemented robust validation and testing procedures. Through cross-validation, hold-out testing, and continuous model monitoring, we guaranteed the system's reliability and consistency in performance.
- Designed a solution that was built to evolve, seamlessly adapting to new document types and efficiently handling increasing volumes with self-learning capabilities and scalable infrastructure.

In a few words, by leveraging AI and ML technologies, we developed a robust solution that can extract up to 127 parameters and process up to 450 purchase orders with no issues in less than 5 minutes.



## TECHNOLOGY SNAPSHOT

- AI-powered extraction engine



## BUSINESS BENEFITS

- Documents process that would take hours to process previously, now get processed in minutes/seconds
- High volume of documents can be handled
- 24x7 availability
- Higher accuracy. Zero human error
- Can deploy in Cloud or on-prem environments
- Can process over 450 purchase orders in less than 5 mins.





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