AZURE OCR XORIANT SMARTCAPTURE SOLUTION FOR LIFE SCIENCES

Increased operational efficiency and reduced TCO using document digitization solution Xoriant SmartCapture.

Client Background

Our client is an industry leader in cloud-based software and services for the life sciences domain. They provide solutions to improve health and quality of life, that advance the growth and success of valued clients in the global life sciences industry. The commercial services division of our client owned a sample management and distribution system. This was used by healthcare practitioners who filled up sample request forms and sent them to our client for further processing. Data entry operators fed the necessary information from scanned sample request forms, acknowledgment of content, and follow-up forms into the sample management system. This entire system was manual, time-consuming, and lacked accuracy since it was dependent on the operator's performance. The key objectives of the client included:

- Automate the sample processing and distribution process.
- Make the complete process seamless and improve efficiency.
- Reduce the costs associated with business operations.

Xoriant Solution | Key Contributions

Xoriant used its very own state-of-the-art intuitive document digitization solution SmartCapture developed using Microsoft Azure OCR. The solution uses Microsoft Azure OCR services and Xoriant Machine Learning algorithms to extract printed/handwritten text (including tables, nested tabled, key-value pairs, etc.) from images and multi-page PDF documents. The solution made reports searchable for clinical scientists with limited IT knowledge. Xoriant SmartCapture solution helped the client to identify genuine requests, accurately extract the information from scanned sample request forms, reducing manual errors and efforts. The key contributions included:

KEY BENEFITS

- Increased process operational efficiency by 50% with the implementation of Xoriant SmartCapture.

- Achieved 98% accuracy in information extraction from scanned documents using Xoriant SmartCapture.

- Reduced manual tasks and costs associated in business operations by using Xoriant SmartCapture.

- Automated business workflows and made the process seamless using Xoriant SmartCapture.

- Designed the Xoriant SmartCapture solution to accept input files in PDF and TIFF formats i.e., scanner output format.

- **Handled document classification, data extraction using Xoriant SmartCapture** by studying a set of client's documents from various document families. Multi-step decision-making and machine learning algorithm were used to identify genuine sample request forms, acknowledgment, and follow-up forms.

- **Extracted the business information using Smart Search Indexes** including Label-Value pairs (Program Number, Practitioner's Name, etc), Tables (Product Name, Quantity, Manufacturer, etc) and passed it to the sample management and distribution system.

- **Performed end-to-end data extraction quality checks using Xoriant SmartCapture** with our expert engineering team to ensure accurate inputs to the sample management and distribution system.

Client Testimonial

Xoriant SmartCapture solution helped automate our business processes for quick sample processing and distribution. The solution helped to identify genuine requests, and extract information from scanned sample Request Forms, Acknowledge of Content, and Follow-up forms. It simplified validation requests, data extraction, before passing them to the system for further processing. With Xoriant SmartCapture, we can improve operational efficiency, achieve accuracy in data capture and processing, and accelerate smarter and faster decision-making.

Technology Stack

Python | Computer Vision (OpenCV) | Object Detection (inception model) Image Processing (OpenCV) | Tesseract OCR | Azure OCR | Handwritten Text Detection Models No-SQL DB (Elasticsearch/MongoDB) | Virtual Machines on Azure

Xoriant is a product engineering, software development and technology services company, serving technology startups as well as mid-size to large corporations. We offer a flexible blend of onsite, offsite and offshore services from our eight global delivery centers with over 4000 software professionals. Xoriant has deep client relationships spanning over 30 years with various clients ranging from startups to Fortune 100 companies.