AIDE

Automated Intelligent Data Extractor

idexcel

AIDE (Automated Intelligent Data Extractor)

In today's rapidly changing digital era where **2.5 quintillion bytes of data are generated a day**, organizations must ensure incoming information is accurately and efficiently processed. Text based PDFs, handwritten forms, and scanned documents were originally designed with information processing by humans in mind and not for modernized computer data processing workflows. This presents a major opportunity for organizations to leverage the most advanced technology to innovate and reinvent operations.

THE MAJOR DATA EXTRACTION CHALLENGES

As we still tend to handle documents the same way we did years ago with human workers doing manual data entry, there are many challenges that arise when extracting unstructured data from those forms, applications, images, and PDFs. There are also less sophisticated automation tools that lack the intelligence element needed to train data processing models on an ongoing basis. For example, traditional OCR and document extraction solutions are often deployed for a very specific problem with little reuse of common technologies from application to application.

The most common data processing challenges posed by both manual and rudimentary automation tools that **Idexcel AIDE solves are :**

Common Problems & Bottlenecks	Idexcel AIDE's Fix
Manual errors that compromise data integrity	Improves accuracy rates to up to 95%
Time and complexity of processing unstructured data	Processing of data becomes easier, faster, and more accurate
External/Internal application compatibility issues that lead to more costs	Integrates commonly used applications and helps develop a tailored integration process with unique applications
Manual workforce costs and resource management challenges	With automation and powerful continuous learning, the processing time is reduced from days to minutes
Inability to scale during seasonal/event-driven influxes	This framework scales easily to accommodate larger workloads at minimal or no additional costs
Human worker burnout and exhaustion with manual, repetitive tasks	Minimal employee oversight is required to manage ongoing tasks

TYPICAL DOCUMENTS HANDLED BY IDEXCEL AIDE

➤ Tax Forms - Any Commercial Tax Forms like 1065, 1220, 1120S, etc. and Individual Tax Forms like 1040, W-2, etc.

➤ Account Setup Forms or any Banking Services Enrollment Forms

➤ Accounts Receivable & Accounts Payable Records extracted as Table

➤ Summary of Bank Statements

➤ Service Request Forms with Handwritten Text

➤ Insurance Claim Forms or Application Forms

Although these different documents can be easily understood and differentiated by a human but would be difficult for simple data extraction solutions to interpret. Traditional OCR with a rules-based extraction approach is not a feasible solution due to the complex nature of the variations and features. That complexity of extraction increases even more if the input has handwritten text and multilingual content.

It's quite easy to automate a data extraction process when all document layouts are similar. In this case, a simplified template-based approach can help. Other times, the documents may have similar layouts, but the information within those documents may vary vastly. With Idexcel AIDE, we can process all these different elements at a much more accurate and rapid rate.

THE SOLUTION

Idexcel AIDE is an all-encompassing automated, intelligent, data extractor that enables rapid processing of documents, PDFs, images, for financial operations, application processes, and any other procedures that involve the intake of data in an unstructured format.

CORE FUNCTIONALITIES OF IDEXCEL AIDE

➤ Extracts typed numbers, words, phrases, etc.

➤ Extracts handwritten data from scanned documentation

➤ Processes various file formats - PDFs, images, word documents, scanned files, etc.

➤ Reduces file processing time significantly from days to minutes

➤ Mitigates risks and improves data accuracy & records integrity by eliminating manual errors

While many traditional tools and platforms are antiquated and slow, our AIDE framework creates a smart and automated process to read the document, understand the layout in which the information is presented, and prepare it as required. We have built this framework to differentiate between these layouts, features, and formats, like how a human reading data from an input document would.
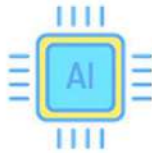
AIDE FEATURES

Customized Solution Framework

Template free extraction

Printed and handwritten text

ISO, PCI, SOC compliance

AI stack with CV, ML, NLP, and NN

Any document & file types
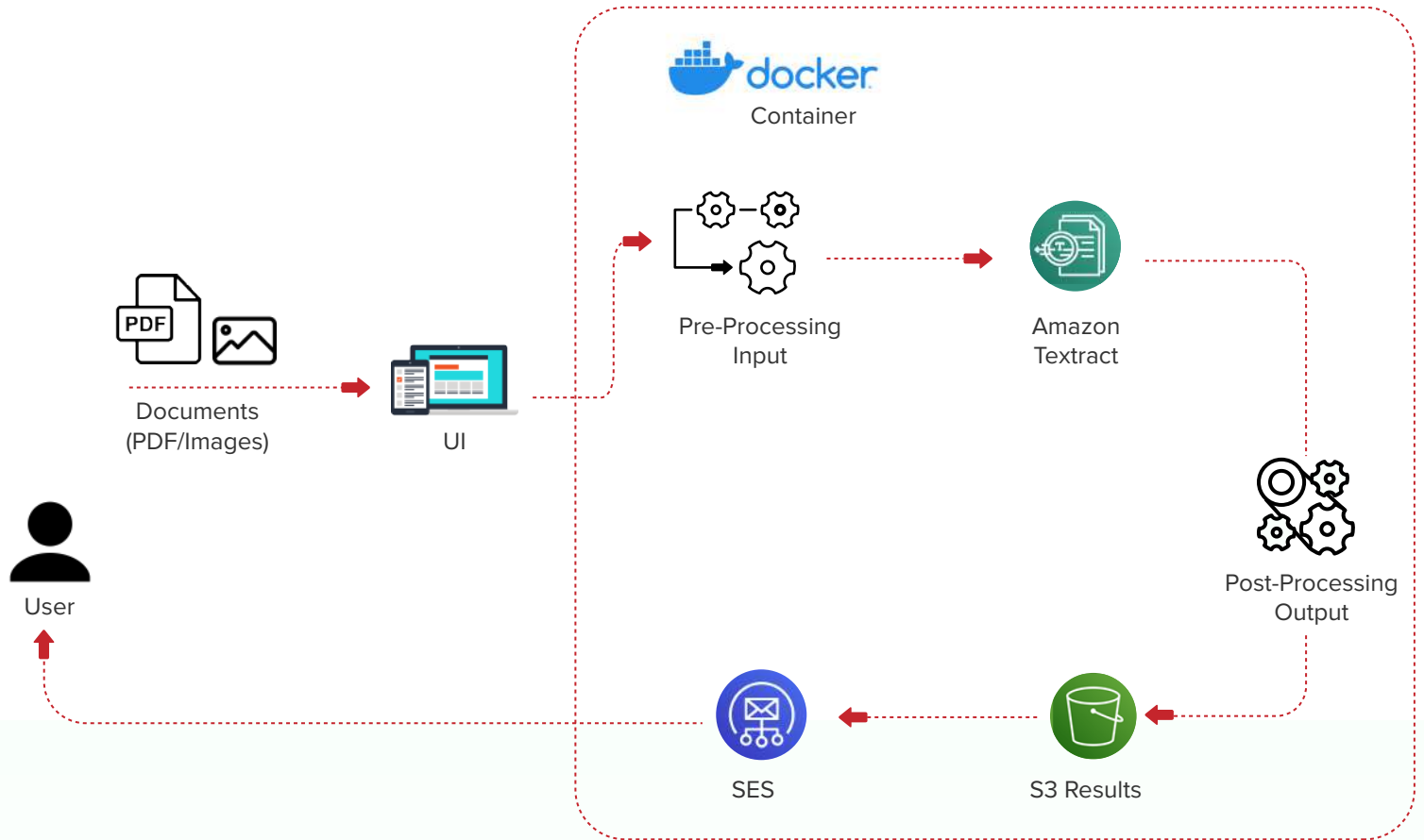
Human in the loop

Setup and Pay per use

COMMON DATA ELEMENTS PROCESSED WITH AIDE

▶ Key and value pairs in various orientations

▶ Data with headers and values below some, with line or space separators

▶ Contextual information appearing as a stream of texts

HOW DO WE APPLY OUR ARCHITECTURE?

Our complete solution can be containerized and deployed at scale – ensuring you have the quickest solution in place to meet your requirements. Each solution is tailored to unique operational needs as we understand every organization has its own preferences, requirements, and goals.

PRE-PROCESSING AND POST-PROCESSING

Our AIDE framework uses a custom pre-processing phase of images to boost the recognition score and a sophisticated post-processing pipeline to increase the output quality of the extracted data.

Some of the image pre-processing techniques include de-skewing, de-speckling, image binarization, layout analysis, zone segregation, and image normalization. After the extraction of the data is complete, we apply several natural language processing techniques during post-processing to ensure the extraction is accurate.

KEY ADVANTAGES OF AIDE

Saves Significant Time: Time is one the most indispensable resources for any organization. In a world that is constantly bombarded with billions of data at a rapid rate, relying on the speed and accuracy of manual labor introduces operational vulnerability. Automation gives back the time and energy to team members to focus on creative thinking, innovation, and building meaningful services.

Improves Speed and Accuracy: Data extraction and Data Entry are highly error-prone tasks when completed by a human worker. By using an automated and intelligent data extraction solution, organizations can prevent those small mistakes from happening and avoid larger data quality issues down the road.

Enhanced Data Value: Automation of manual and repetitive tasks significantly accelerates information processing procedures, resulting in faster data analysis for stakeholders to make critical business decisions. Achieve greater value from your data to make a greater business impact.

Language Agnostic Extraction Power: With the power of AI, AIDE can extract information from one or more languages from documents. This is especially helpful for supporting, optimizing, and elevating processes in international organizations with multilingual workforces and customers.

Better Security: As we have built our solution on top of the AWS Cloud, the solution adheres to strict security guidelines and best practices.

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 Idexcel solution can help your business. Contact us today !

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