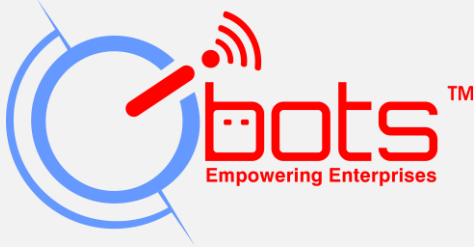# Accelerating Accounts Payable Data Processing with GIBots DigiDoc: Accounts Payable and Reconciliation Automation Solution

GIBots DigiDoc, powered by Intel® technologies, enables businesses to perform financial administration tasks with greater throughput and improved risk management.

About GIBots

GIBots offers an innovative hyper-automation platform that helps empower clients with AI-driven business processing solutions. Their solutions require no-code and offer advanced capabilities to help their customers drive actionable outcomes.

Executive Summary

Accounts payable (AP) is an integral part of any organization's operations, responsible for meeting strict compliance requirements and handling all financial obligations securely and on-time. AP document processing includes several resource-intensive, repetitive tasks which have conventionally been performed manually, requiring hours of human labor. These tasks include processing invoices, credit notes, debit notes, all of which traditionally require manual input and reconciliation from disparate systems.

Not only do manual methods lead to processing delays, but they also introduce a layer of vulnerability to businesses with the added risk of erroneous data extraction and entry by human operators. Additionally, by using human operators, businesses are at a higher risk that workers engage in fraudulent billing or invoicing procedures which can impact the business bottom line. In 2020 alone, the AFP Payments Fraud and Control Survey revealed a staggering 81 percent of companies were targeted for payment fraud.[1]

Digital solutions have been created to address these challenges and are facilitating an evolution in this domain, commonly leveraging aspects of artificial intelligence like machine learning and natural language processing. The application of these technologies helps business institutions process documents faster by automatically extracting, classifying, and reconciling data from documents like invoices, POs, receipts, and more to help streamline account processing procedures securely.

Maximize ROI with a Proprietary AI/ML Powered OCRi Engine

GIBots DigiDoc: Accounts Payable and Reconciliation Automation Solution helps customers process internal and external documentation faster and more accurately, supporting applications such as bank-reconciliation, automated tax-filing, and procure-to-pay automation.

While many digital solutions run GPU-based systems on an AI/ML Intel-based server which is slow and costly to integrate, DigiDoc is a software-as-a-service solution that runs on a CPU-based system to optimize inferencing scale. DigiDoc provides an easier and more cost-effective deployment and information management experience without compromising processing speed.
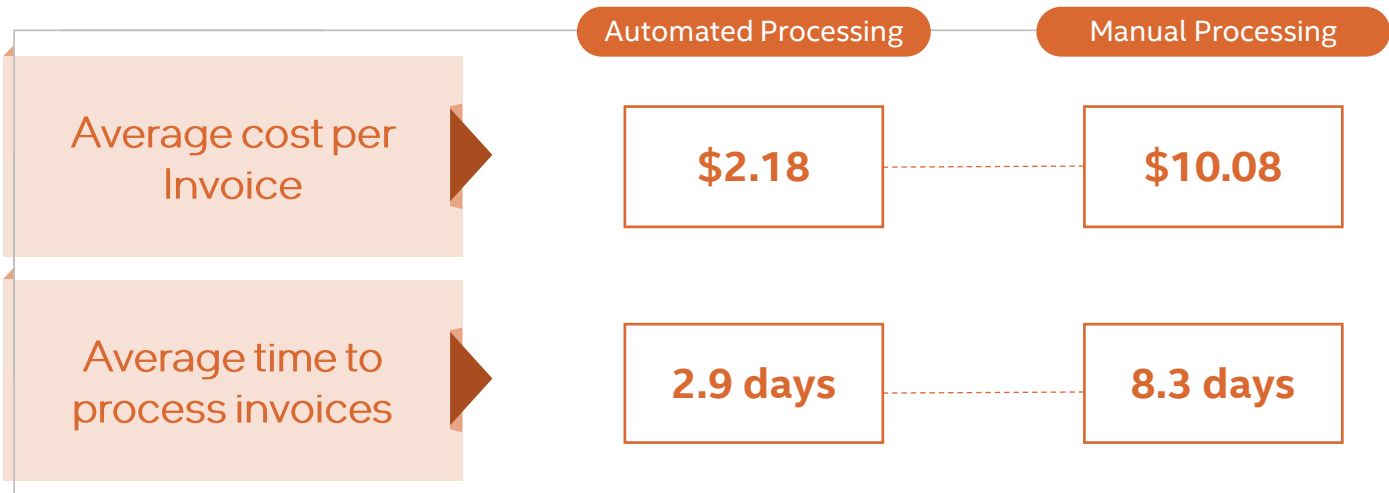
The solution begins by capturing a photo of a document and uploading the file to the cloud via a Rest API over HTTPS protocol. Following data extraction, DigiDoc consolidates and interprets data using proprietary optical character recognition capability. Further, processing & validation is done by Rule engine-based on over 120+ business rules on an AI/ML Intel-based server and once a result is generated, it is transferred using a Rest API and web socket protocol to the end user on a mobile or desktop application.

The software platform is device and OS independent and can be hosted either on-premise or on a private cloud, enabling flexible deployment options based on individual customer preferences and budgets.

Whether a customer has already implemented some AP automation into their operations, or their operations are completely manual, implementing automated AP can help businesses save time and money. In the case of processing invoices, a KPYMNTS study showed that when businesses introduce AP automation into their business model, they can obtain cost savings of 78 percent and time savings of 66 percent per invoice.[2]

Automated AP saves time and money

	Automated Processing	Manual Processing
Average cost per Invoice	**$2.18**	**$10.08**
Average time to process invoices	**2.9 days**	**8.3 days**

Improve Efficiency with DigiDoc's Workload Consolidation Capabilities

Customizable Workflows

DigiDoc offers the ability to customize workflows to help ensure all document processes occur on-time and routed to correct locations automatically. Customers can customize their processes through a drag and drop facility. Once the workflows are set up, the extracted fields can be presented on the platform screen to review.

Retraining, No Code AI Model

The interface is a no coding platform, offering customers convenient pre-set workflows that can be selected just with a tick of a few boxes, depending on the number of attributes that the model needs to extract. Once they are marked, the AI model will run under the workflow process and will extract the attributes with a high level of accuracy.

The AI machine algorithm is constantly retraining with each new document it processes, improving the accuracy of the data reconciliation process. Customers have the option to customize the AI training model based on their specific kind of formatting and layout requirements when desired.

Business Validation through Rule Engine

The platform's proprietary Rule Engine helps in maintaining the compliance parameters by checking the financial documents for over 120+ business rules automatically like Tax rate, Vendor onboarding check in ERP, VAT amounts, etc. Thus, preventing manual intervention and time consumption by quick and accurate processing of documents.

## Real-time Alert Notifications and Reports

DigiDoc sends real-time alert notifications to designated users via mobile or desktop applications when discrepancies occur to the AP model. Working two-fold, the notifications help ensure any errors to the system can be addressed quickly, as well as helping reduce the chance of fraud. Notifications also help in speeding up dependent activities, e.g., notifying purchase teams on vendor creation via an ERP system to help accelerate the vendor payment process. Notifications are sent either by email, or as an SMS, and can be triggered for various business conditions, such as when set thresholds are met, e.g., overdue invoice payments from vendors or extended budget spend.

DigiDoc supplements the business's end user experience with one-click deep dive graphical reports to show all the data that has been extracted in the customer's preferred duration of time. The reports can be downloaded to an Excel format to help inform accountants, and other financial experts review financial distribution and allocation insights.

Accelerating AP Processing with Intel Technologies

GIBots leverages 3rd Generation Intel® Xeon® Scalable processors and Intel® AI technologies to deliver high-performing inference optimization, providing a more cost-effective CPU-based alternative over traditional GPU-based systems. The integration with 3rd Gen Intel® Xeon® Scalable processors enables DigiDoc to process a broad range of workloads from cloud to network to edge by utilizing built-in workload acceleration and advanced hardware-enhanced security capabilities. DigiDoc can perform more CPU frequencies and deliver greater throughput compared to previous generation of Xeon processors.

In collaboration with the XGBoost community, Intel has been directly upstreaming numerous optimizations to provide superior performance on Intel processors. The XGBoost provides drop-in acceleration for the Intel Xeon Scalable processors to speed up model training and improve accuracy for better predictions.
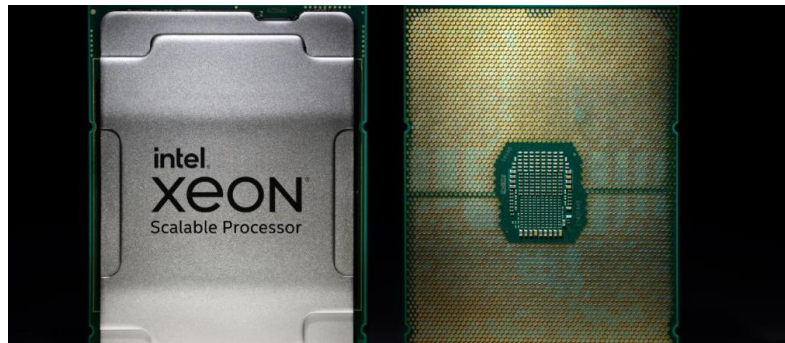
Results

By leveraging the latest Intel hardware and software optimizations, GIBots was able to reduce the inference time for 5 million records by 43 percent on Intel optimized CPU-based systems.[3] The optimized platform allows clients to process their financial documents at a much faster rate with minimal errors, and at a lower cost compared to GPU-based processors.[3]

XGBoost Inference Optimization on 3rd Gen Intel® Xeon® Scalable Processor

43% Lower Latency (lower = Better)

Normalized Latency axis: 0, 0.2, 0.4, 0.6, 0.8, 1

Intel® Xeon® Platinum 8280L CPU @2.70GHz — 1
Intel® Xeon® Platinum 8380 CPU @2.70GHz — 0.57
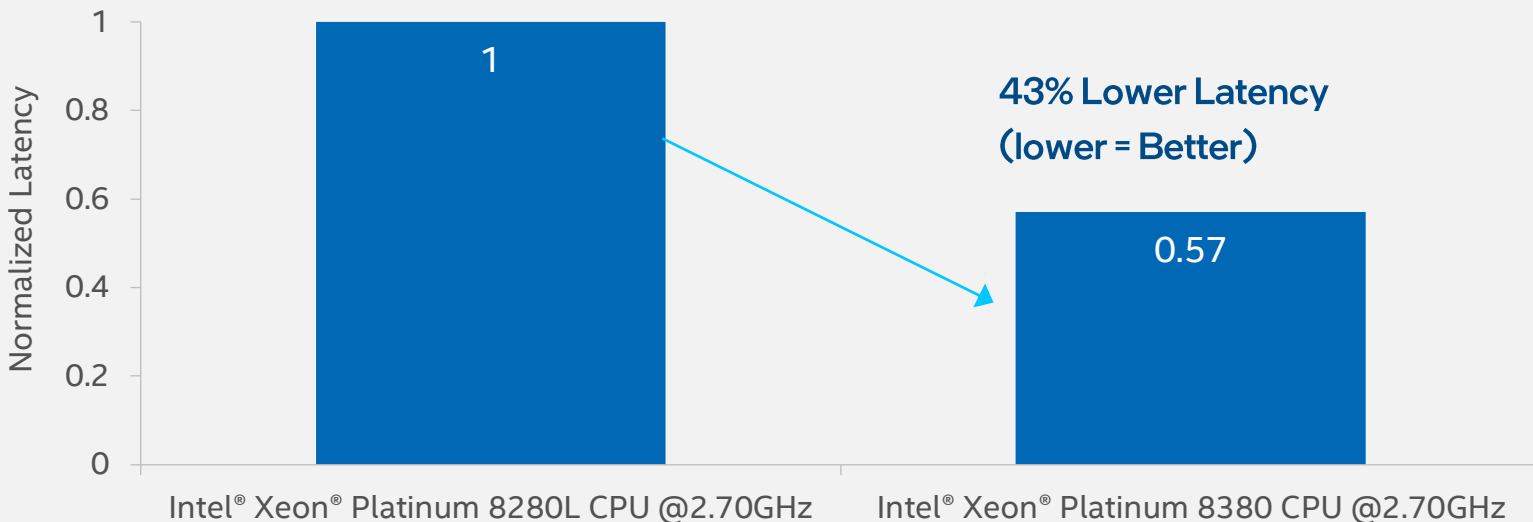
Solution Summary

For any business, regardless of size, AP document processing will always be part of their business operations. With the implementation of DigiDoc's AP automated solution, in collaboration with Intel technologies, businesses can achieve a higher ROI through accelerated account payable workload performance, as well as better user visibility and management insights to aid future business decisions on a consolidated cloud-supported platform.

intel.

Learn More

- Intel® Xeon® Scalable Processors Product Page

- Intel® oneAPI AI Analytics Toolkit Product Page

- GIBots Website

- GIBots DigiDoc Homepage

1. https://www.jpmorgan.com/commercial-banking/insights/afp-fraud-survey-2020 JP Morgan, May 2021

2. https://www.pymnts.com/accounts-payable/2019/deep-dive-realizing-ap-automations-roi/ PYMNTS.com, November 2019

3. Baseline: Test by Intel as of Jan/2022. 1-node, 2x Intel® Xeon® Platinum 8280L CPU @ 2.70GHz, 28 cores HT On Turbo ON Total Memory 377 GB (12 slots/32GB/2934 MT/s DDR4), BIOS: SE5C620.86B.02.01.0011.032620200659(ucode: 0x5003102), Ubuntu 20.04.3 LTS, 5.4.0-91-generic, gcc 7.5.0 compiler, Inference Framework: Xgboost (1.4.2) model. New: Test by Intel as of Jan/2022. 1-node, 2x Intel® Xeon® Platinum 8380 CPU @ 2.30GHz, 40 cores HT On Turbo ON Total Memory 252 GB (16 slots / 16 GB / 3200 MT/s DDR4), BIOS: SE5C6200.86B.0022.D64.2105220049(ucode: 0xd0002b), Ubuntu 20.04.2 LTS, 5.4.0-89-generic, gcc 7.5.0 compiler, Inference Framework: Xgboost (1.4.2) model

Notices & Disclaimers