Artificial Intelligence in Accounts Payable

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Introduction

In simple terms, Artificial Intelligence (AI) is a technology that enables a computer to mimic human cognition to carry out tasks. Only a few decades ago, AI was seen almost exclusively in science fiction novels, but now it is evident throughout peoples' lives — both business and personal. It corrects text messages and optimizes Google searches; it has created a market of virtual assistants that respond to human language and help with a variety of tasks; it has led to the rise of driverless vehicles.

When applied to business, AI has many benefits. For example, when using AI technology in supply chain or inventory management, businesses gain insight into what, when, and from where items should be stocked. AI is largely responsible for retailers' ability to offer their customers a tailored online shopping experience, using information on past purchases, preferences, and interests to generate a tailored shopping journey for each buyer. AI has also been successfully introduced into back-office finance, specifically with Accounts Payable (AP) automation software, so much so that it's difficult to find AP software providers that don't incorporate AI in their software in some way.

Unfortunately, some of these AI-based features have been met with mixed reception by businesses, as the functionality is sometimes regarded as unnecessary or invasive. Some finance leaders find it difficult to see what AI is actually going to do for their AP teams and processes, and this unknown factor can seem too risky to disrupt the current state. There is also often a gap between AP software providers' marketing messaging and the actual application of AI in the tools: a provider may boast that their tool offers cutting-edge technology, but once a user

is in the solution, any real use case can be indiscernible. At the end of the day, these barriers are mostly the result of a lack of education on the true application and benefit of AI for the payables process.

Levvel Research believes that the inclusion of AI in AP technology has already helped innovative organizations change the narrative of their AP function from a cost-center to a strategic advantage for the company. This whitepaper explores AI's role in AP processes and departments by breaking down different types of AI-based functionality and dissecting actual use cases of AI within AP software. This paper will help finance leaders understand how AI will change the function of back-office finance and aid them as they select an AP automation solution utilizing this innovative technology.

Unraveling Artificial Intelligence

AI is rife with abbreviations and wordy, vague terms. Below is a list of some of the key verbiage related to artificial intelligence in order to help readers better understand the core technology.

RPA

Robotic process automation (RPA) is one of the early forms of business process automation. RPA is the automation of repetitive tasks without instruction or prompting from a human user. Without the cognitive ability of AI, RPA's use case is limited to the rote, somewhat mindless jobs businesses have. The technology is only as useful as its instructions are. Slight changes can throw the software off and hamstring an organization's operations, creating more work for employees that should be carrying out more strategic tasks. A common example of RPA is eCommerce websites sending shipping notifications and receipts for orders.

ML

Machine learning (ML) is a subset of AI. ML is best described as a software's ability to learn, adapt, and improve upon tasks without additional programming or instruction. One example of ML in everyday life is Google Maps sending users notifications on what traffic is like and an updated estimated travel time for their next destination. To determine these alerts, ML analyzes both historical and real-time data, including current and past traffic patterns and other factors such as special events and road closures.

Big Data Analytics

Big data analytics is the wrangling of the large data sets generated by modern software in order to draw useful conclusions regarding business operatoins. The advent of modern business software brought about more data than organizations knew how to hangle—in many different formats and systems. Big

data analytics is the study of combining all of this data and using traditional statistical modelling to generate trends and issue predictive and actionable analytical assessments. This offers businesses a host of advantages: more personalized relationships with customers and suppliers, better marketing, increased company-wide efficiency, and insight into what future KPIs, liabilities, and spend will be. A real world example of big data analytics would be the historical data on traffic patterns used in the ML Google Maps case.

NLP

Natural language processing (NLP) is one of the less confusing, more self-explanatory subsets of artificial intelligence. It's the conversion and interpretation of information input by humans via text or voice into actions or presentation. Common examples of this include Amazon's Echo/Alexa devices, Apple's Siri, and the chatbots commonly featured on eCommerce websites.

Applications of AI in AP Software

AI in Imaging

ML is one of the most commonly utilized technologies in imaging. Optical Character Recognition (OCR) is an integral piece of AP automation. It's used to ingest invoices in archaic formats such as paper, email, and PDF and transfer the data into searchable, modern, electronic invoice format. ML is designed to rectify the shortcomings of OCR to make it more adaptable and accurate. It's used to "learn" the format of invoices, even to the point where each vendor has a profile for their invoices. Through this learning process, it knows where to find vital invoice information and even what spend category line items belong in. At a more basic level, RPA is used for simpler invoices with a consistent format, where line items, key figures, and other important items like dates and vendor name are all in the same place every time.

AI in Workflow

RPA can be used to automatically route invoices to approvers based on rules software users assign. This is useful, but what happens when a supplier sends goods in several different spend categories? This where ML is used to go a step further. ML is also used in improving the document workflow and routing process. Using a combination of dollar amount thresholds, GL codes, predetermined rules, line items, and vendor information, the system can assess what the appropriate course of action is and who to send it to for approval. Additionally, if an invoice is stuck waiting for approval for too long, it can automatically reroute it to the next appropriate approver.

AI in ePayments

Natural language processing is one of the main technologies Levvel Research has seen used in electronic payments (ePayments). Payments can be sent to suppliers using chatbot virtual assistants. Those virtual assistants are also combined with machine learning technology to heed thresholds, purchasing document approvals, and automatically prepare payment files. For security purposes, AI and ML are also paired up to power fraud detection and sniff out suspicious payments before they happen. This information can be sent by chatbots in an alert to AP staff to tell them that payments to suppliers are outside of the normal parameters. This is particularly applicable to recurring payments, such as utilities and services that might be different from their typical amount.

AI in Reporting & Analytics

In the numbers-driven world of Accounts Payable, big data analytics is very appealing. Not only does reporting based on a larger data set result in more accurate evaluations, but it also plays a huge role in what the future of the company will look like. When combined with AI and ML, this creates predictive analytics; in emerging technology, this creates actionable/prescriptive analytics, where the system can recommend a course of action the business should take, as opposed to merely presenting the data for them to analyze. This differs from the current technology that relies on users drilling down into reports to see trends and take action, but creates an alert ecosystem, where trends aren't waiting to be discovered by AP staff and instead critical business information is relayed to the appropriate party with a set of possible courses of action. Another key ability big data analytics creates is scorecarding and evaluation: mainly of suppliers and purchasing habits. Suppliers are scorecarded on aspects such as: on-time delivery performance, product quality, discounts offered, and response time to purchase requisitions. Additionally, individual purchases can be evaluated for likelihood of approval with estimated delivery data and if they have a high enough score, won't require approval. NPL is also used in reporting and analytics features. Virtual assistants powered by NPL are designed to smooth the reporting process. Instead of having to go through an elaborate creation of a custom report to see KPIs and business information, instead you can simply ask the virtual assistant to present the data you're looking for.

What AI Means for the Business

While understanding the ins and out of AI-based features is valuable, many organizations are more interested in how AI will affect the AP department, the daily lives of AP staff, and the business as a whole. Some employees at the non-administrative level view AI as a threat to their jobs, but this belief is mostly unfounded. While AI will change the nature of AP jobs, the technology is largely used to remove the manual, low-value tasks, such as data entry and exception management, so that employees have time to focus on more strategic, analytical activity. Some organization may reallocate employees as a result of AI-based automation. The most likely outcome is staff reallocation rather than elimination, as the organization may move employees to different departments where they can bring more value to the organization with their skills.

AI will continue to have a colossal effect on Accounts Payable, and Levvel Research sees this change as a largely positive one for both employees and businesses. Employees gain experience in less manual, more cerebral work, and businesses are able to reduce costs and scale more easily. AI is also a huge driver for digital transformation (read more in Levvel Research's 2019 Guide to Procure-to-Pay & Digital Transformation). By transforming AP into a modern, state-of-the-art department, the organization as a whole becomes more prepared and nimble for when changes, exceptions, and setbacks inevitably occur.

Conclusion

Some see AI in the back office as a "passing fad", something that has potential but limited actual usefulness in AP software and other business process automation areas. Levvel Research disagrees with this line of thinking. AI is here to stay, as software providers continue to make its development a priority, and as more AP departments cite the ways the technology has benefited their organizations. The majority of software providers are applying AI with intention and precision, identifying their customers' most urgent pain points and leveraging the technology to alleviate them in new, inventive, and often discreet ways. And as these providers help to remove tactical problems from the AP process, they are also looking forward — anticipating the finance department's evolution into a more strategic arm of the company, and offering AI-based tools like advanced analytics to enable this shift. AI is already a pivotal part of AP automation, and as technology continues to take a more prominent role in business as a whole, it will be hard to imagine the back office without it.

About Levvel Research

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