



How AI is redefining the claims world

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Artificial intelligence (AI) is getting a lot of attention in the insurance industry these days for the potential efficiencies and increased accuracy it could bring to the claims management process.

The broad definition of what counts as AI runs the gamut from simple automation for carrying out a single job, to complicated systems that strive for human-like reasoning, behavior and problem-solving capabilities. There are three facets of AI: learning (the acquisition of information and rules for using it), reasoning (using rules to reach approximate or definite conclusions), and capacity for self-correction. It's important to understand, though, that there are many types of AI — each of which may or may not be of practical or useful application in our workflows.

TYPES OF AI AND APPLICATIONS IN THE INSURANCE INDUSTRY

ROBOTIC PROCESS AUTOMATION (RPA)

In claims management, RPA software typically uses a narrow scope to mimic human activity against a software application. In layman's terms, the RPA "bot" (a software application itself) replaces multiple, repetitive keystrokes and mouse functions with the click of a single button. In this way, RPA tools can introduce new efficiency and accuracy into a user's daily routine. As an example, let's say one step in the workers' compensation process is to notify an employee's supervisor he's been cleared to return to work. Many TPAs will generate automatic text or email messages sent to the employee to confirm; once confirmed, the examiner will go through a series of steps to complete the process. Because these actions need little in the way of analytical — human — decision-making, a bot could review the log of inbound confirmations, open a claim based on the

record tied to the confirmation, enter the return to work date, and automatically fire off a corresponding email notice to the supervisor. This eliminates time-consuming administrative work from the examiner's daily responsibilities.

One challenge to implementing RPA tools successfully is identifying those motions. Business process discovery, another RPA-related tool, can be installed within an organization to observe the administrative team's actions. Using AI, it would conduct a series of hypothetical scenarios to determine which actions may benefit from RPA. Tools like these can help ensure that claims management processes flow smoothly and proficiently for all work streams.

RULES-BASED DECISION ENGINES

Examiners make dozens — sometimes hundreds — of decisions a day using logic based on relevant claim data. Rules-based engines work to automate that kind of activity by assessing all possible inputs and circumstances, then concluding which tasks need to be performed.

Remember when Deep Blue became the first computer system to win at chess against the reigning world champion? That was a classic example of a decision engine. Companies with extensive claims management experience have a wealth of history and data to draw upon when designing rules engines to facilitate or automate the handling process. Practical applications within modern claims management include selecting recipients for new claim notifications, triaging claims based upon anticipated severity, and even evaluating low-dollar or low-severity claims for potential automation.

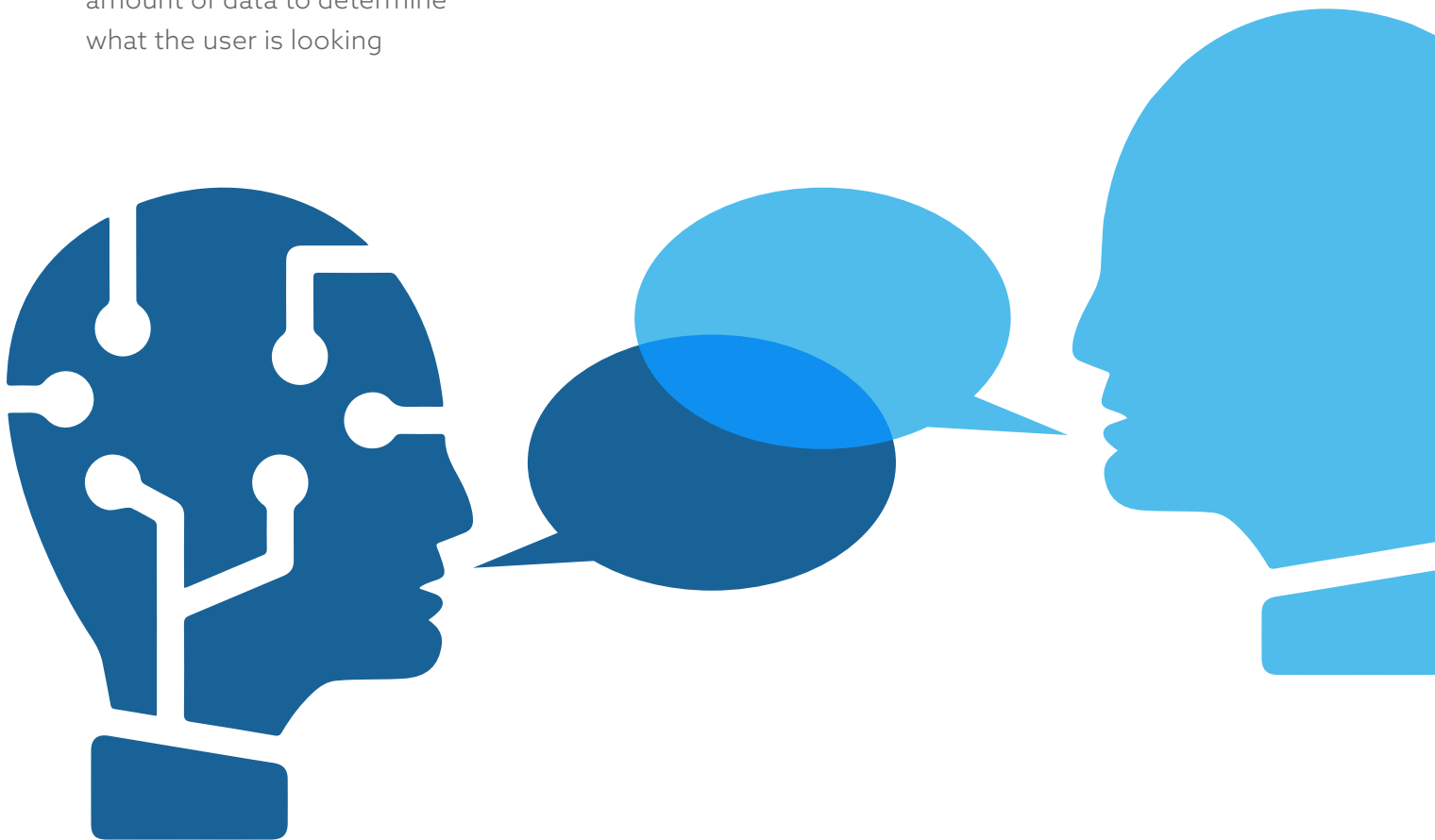
MACHINE LEARNING

At its core, machine learning means training a computer to learn and respond like a human would. There are hundreds of modern examples of this: self-driving cars, email SPAM filtering, targeted online shopping suggestions, image recognition and analysis. Machine learning uses a series of algorithms to parse through billions of pieces of data, then it draws conclusions using decision trees and statistics to get to a desired end result.

Some of machine learning's practical applications in the insurance industry include:

- **Chatbots:** Consumers expect 24/7 customer service these days. Because few organizations can afford to staff employees around the clock, virtual customer service tools like chatbots are growing in popularity. With a chatbot, the user carries on a conversation with a computer, through an AI concept called natural language processing. This linguistic-based technology mines an ever-expanding amount of data to determine what the user is looking

for help with based on the conversation. A chatbot must understand and recognize that a question about claim status may actually mean something else — like, "Has my claim been approved?" The chatbot can guide the user to helpful responses or provide links based on the information within a chat session. Thanks to AI's machine-learning capability, the more a chatbot is used, the "smarter" it becomes in identifying and solving problems.



■ **Digital image recognition:**

AI has made tremendous strides over the past few years in mimicking a human's visual cortex in order to recognize objects, motion or characters within a picture. The latest technology in self-driving vehicles must be able to recognize and classify things like lines on a road, obstacles and pedestrians. In the claims space, carriers are now using AI to conduct real-time automotive damage assessments or estimate damage to roofs or buildings after catastrophic storms. In the medical industry, AI is now being applied to radiological images to detect bone fractures, lesions and other types of medical anomalies needing treatment. There will always be concern from the carrier's perspective about potential inaccuracies, but increased computing capacity and quantity of available data records improve the likelihood that this technology will continue to spread throughout the claims industry.

■ **Predictive modeling:**

Often referred to as decision optimization, predictive modeling software analyzes past claims experience to determine patterns that will predict the outcome of a claim. When run continuously against an examiner's daily claim activity, it can evaluate the attributes and dollar amounts within a claim to trigger a deeper dive. Early intervention models are meant to change the outcomes of high-severity claims, which might have long durations and could create a challenge in determining costs at the beginning of the claim lifecycle. Flags may be set that alert examiners to the possibility of large losses, litigation, high complexity, or the need for intervention when combinations of prescription drugs may be problematic or dangerous. This allows program administrators and risk managers to focus on specific at-risk claims in order to apply appropriate resources early on, making an impact in key areas like return to work and getting the best healthcare for injured employees.

■ **Cutting-edge security tools:**

The latest AI network security tools can monitor, classify and visualize cyber threats by ingesting all data sources within a company's wide area network (WAN), including egress and ingress points. This type of software will create a baseline for what "normal behavior" is for that organization, and can then detect anomalous and malicious activity as well as other emerging threats in real time. This includes insider threats, low-and-slow attacks and automated viruses like ransomware.

WHERE AI IS HEADED

Many AI discussions hypothesize about whether the expanded use of software could really oust human activity. Without some form of emotional intelligence (EI), AI can't begin to replace an examiner with a system. New telephonic technology used in call centers seeks to detect stress levels or dissatisfaction in a caller's voice; the software analyzes changes in speaking pattern, agitation, tension in a voice and other sounds a caller makes to alert agents to an unhappy customer. The science of improving EI across insurance organizations will enable claims teams to build stronger bonds and enhance communication practices with consumers.

We'll also begin to see data become "federated" across organizations in new ways. Data federation is the practice of pulling together and aggregating data from many separate remote data sources into a single model. Assembling relevant data from different enterprises allows for new approaches to data mining; cluster analysis and anomaly detection allow organizations to recognize correlations and outliers in data sets.

Really, though, it's nearly impossible to predict where AI will go next. As technology evolves, it will process infinitely more data than ever before. Ten years ago, nobody could have guessed that chatbots would work to discern a sentiment, detect frustration or interact with remote databases to provide relevant, real-time responses. And while the future of AI seems boundless, it's important to realize that machines do have limitations. Computers can analyze patterns and tell us the best way to get from point A to point B, but they can't tell us the context that informs the decisions. Humans have to understand nuances, idiosyncrasies and the unique behaviors that guide our communications with others. In that way, our people are irreplaceable.

